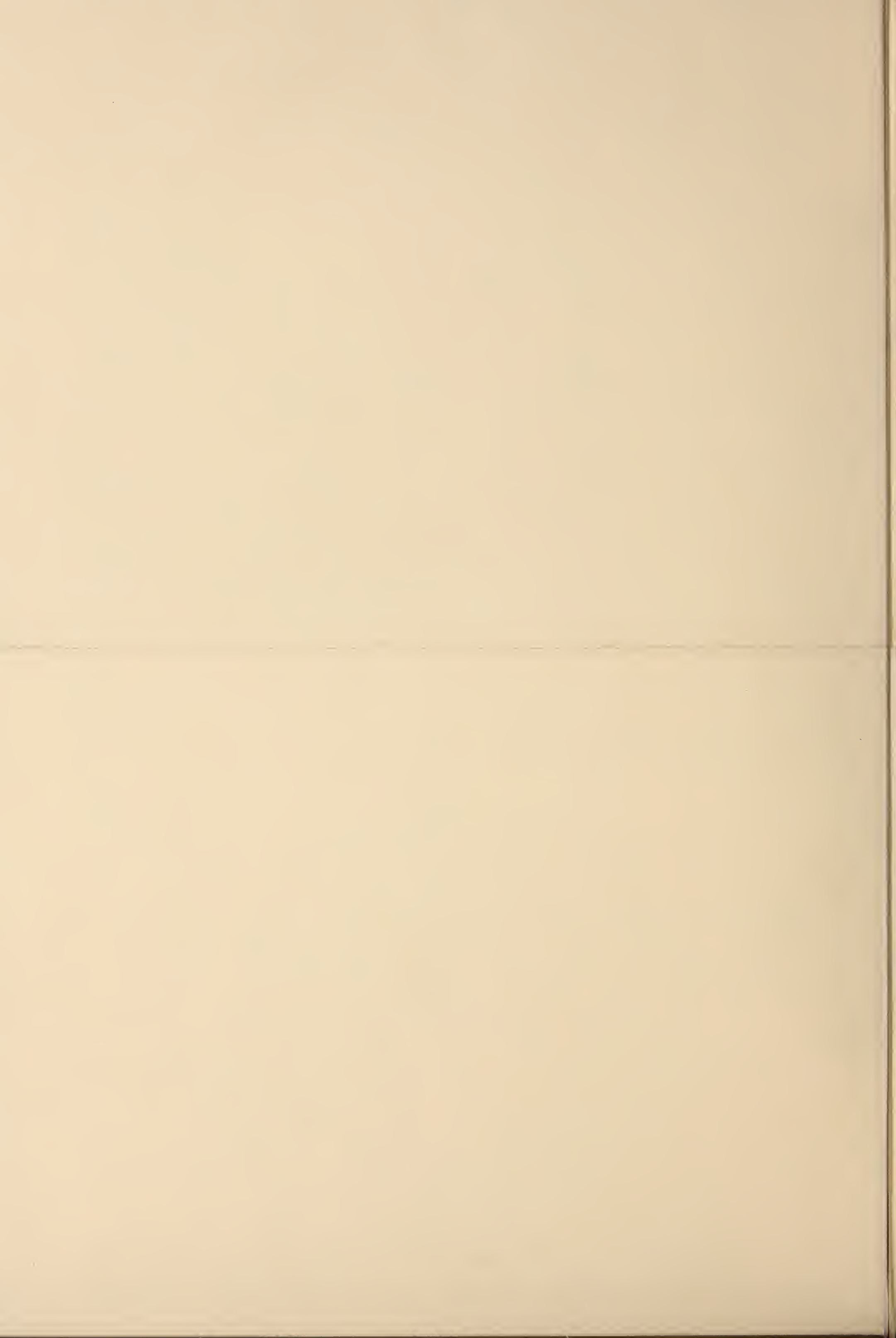
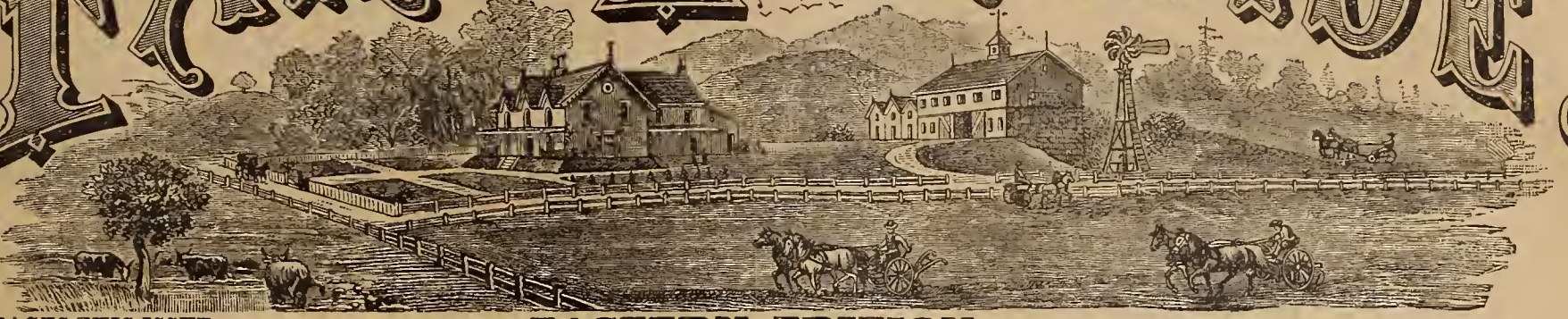


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FARM AND FIRESIDE.



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Current Comment.

OUR paper currency is of two kinds, credit money and representative money. Credit money consists of bills or notes issued by the government, and promising to pay on demand the sums of money named on their face. United States treasury notes and national bank notes are of this class. Representative money consists of certificates of deposit. They represent gold and silver coin actually on deposit, and payable to the holder of the certificates on demand. Gold and silver certificates are of this kind. But all our paper currency is based on gold and silver coin, which have an intrinsic value of their own and are a general medium of exchange. Our paper money is redeemable in money made of gold and silver, two precious metals used by all civilized nations for money. The government land-loan scheme, now so zealously advocated by some, involves a radical change in our monetary system. If the change will benefit us, let us have it, no matter how radical it is. But before the change can be made it must undergo the most thorough examination, and the people must be shown that it will really be a benefit instead of an injury.

The proposition is, practically, that the government shall issue a paper currency based on land instead of on gold and silver money, as at present. Since land has an intrinsic value, this does not mean fiat money or a paper currency based on nothing tangible, and the proposition is entitled to a consideration. But the moment we begin to consider it seriously, we are confronted with the changes and the difficulties involved in adopting such a different money system. Our paper currency is now based on something that is a medium of exchange itself; but land is not, and cannot be made a medium of exchange. Here is a radical change at the very start, and who can say that it will be a change for the better? History is on the other side.

At one time France issued a paper currency based on land, and inflated its currency enormously. The value of the *assignats*, so called because they represented land assigned to the holder, declined in six years until they were redeemed at one twentieth of their face value in paper money of another kind, which also fell until the whole paper-credit system collapsed.

Again, each ounce of pure gold has the

same value as every other ounce. Every ounce of pure silver has the same value. But one acre of land does not have the same value that another acre has. There is land not worth twenty-five cents an acre. There is much good farming land worth over one hundred dollars per acre. And there is land in the cities worth many thousand dollars per acre. The proposed currency, then, must be based on land value. How is this to be determined? When a holder of land, an Astor of New York, or a granger of western Kansas, applies to the government for a one-per-cent loan, who will appraise his land?

To put the scheme in operation, there must be formed a great system of national banks or land-loan bureaus with agents, appraisers and attorneys. The advocates of the scheme content themselves with talking about the great benefit the farmers and the debtor class are going to derive from it, and say very little about how the scheme is going to be put in operation and how it is going to be managed. Are these necessary agents, clerks, appraisers, etc., to be elected, and a great national banking system turned over to the politicians? What stability could a currency have that is based on something of so variable a value as land, and that value fixed for the purpose of securing loans by political appraisers?

Let the advocates of government loans on land put forth the complete scheme, so that it can be judged on its merits. Instead of doing that, many of them become incensed the moment it is called in question, and howl about the money power and the debtor class. Farmers should bear in mind that if benefits are to be derived from the scheme at all, capitalists, speculators and the holders of city lots have a better chance than they have. The holder of a small city lot might be able to borrow much more than the holder of a large farm. A speculator could manage to secure a loan greater than the true value of his property by conspiring with the appraiser, then fail to redeem his loan and throw the land on the government. The capitalist would invest in land for the purpose of controlling as much currency as possible. Paper money has so many advantages that its continued use is certain, but the more stable and sound the basis on which it rests the better. No nation can afford to make any reckless experiment; financial ruin is certain to follow.

WHAT is the per capita circulation of money in the United States? is a frequent question. It is about \$24. Last October the United States treasury reported that there were in circulation—gold, \$386,939,723; silver dollars, 62,132,454; subsidiary silver and fractional currency, \$56,311,846; silver certificates, \$309,321,207; gold certificates, \$158,104,739; U. S. treasury notes, \$348,012,226; national bank notes, \$177,250,514.

In 1880 the per capita circulation was a little over \$20. It is now increasing gradually, and there is a demand that the present per capita be doubled. However desirable an increase may be, it must be made without impairing the public credit, or the increase will do more harm than good. The financial condition of a nation is shown more by its credit than by its per capita circulation. Ten years ago Cuba

had a per capita circulation of \$70, and Argentine \$189, but no one can claim that either was in a better financial condition than England, with a per capita circulation of \$25.

THIS issue contains the first of a short series of articles on silos and ensilage. These articles are plain, practical and right to the point, and are commended to farmers who are studying how to make farming pay during these times of low prices and close competition. One thing to which their attention is especially directed, is the great improvement that has been made in the construction of silos. The expensive stone, brick or concrete silo has been superseded by the cheap, single wall, wooden silo. The latter has been found to answer the purpose better, and is so cheap that it is in reach of every farmer. A few years ago the cost of constructing silos prevented many from considering the subject at all. It has been so simplified and cheapened that there is no longer any reason for holding off on account of expense.

The time must soon come when there is a reaction in the cattle industry. The depression has prevailed so long that production has been curtailed, and in the near future the supply will not equal to the demand. Men in the cattle trade point to the recent falling receipts of cattle at the large markets as a sure indication that the turning point has already come. If silos and ensilage makes it possible to produce beef at a small profit now, the profit will be large when higher prices come, as they are certain to do. Taking everything into consideration, there is no better time than the present period of low prices for adopting the new system. You will then be fully prepared to reap all the profits when better times come.

ONE of the best investments a community can make is the judicious expenditure of public funds for the improvement of its highways. But before another cent of money is added to the road tax, there should be a sweeping reform in the methods of improving the roads. Under the methods generally in vogue there is an enormous waste of money and labor. Under reform methods that are possible, the same amount of road tax would do so much good that the people would be willing to have it increased. If they received the worth of their money they would not object to the amount of the tax.

Dr. Collier, of the New York Experiment Station, in an address to farmers on the improvement of highways, said:

"It seems to me that it should be for the future 'the pet scheme' of every man, and of every woman and child also, until some action shall be taken looking to their permanent improvement. Within a week I had the pleasure of riding over a stretch of macadamized road nine miles in length, which within two years has been laid in one of the New England states, and I could not but think that such a road, like a thing of beauty, was a joy forever. Consider for a moment the enormous tax which our roads involve, without considering even the millions upon millions of dollars which, during the past half century, have been expended upon our roads without at present any evidence of improvement in their condition; con-

sider the wear and tear of horses, harness and vehicles which the condition of our roads for months in the year involves; consider the loss of time, which also is money, and the wear and tear upon one's patience, for I doubt whether grace has been given to any sufficient to sustain him for a ten-mile drive over any of our roads during several months of the year."

Public interest in this subject is increasing. To add to this interest and draw forth some valuable suggestions, prizes are offered for the best essays on the improvement of highways. The following explains itself:

"Under the auspices of the American Economic Association, Colonel Albert A. Pope, of Boston, offers \$500 in two amounts, of \$300 and \$200 respectively, for the first and second best essay on Country Roads and City Streets. The essay must not exceed 25,000 words, and should treat of the economic and social importance of good roads, the causes of poor roads existing in much of our country, the best systems of road-making, reconstruction and maintenance, including cheaper methods suited to dirt roads as well as methods for permanent roadways, the best system of street improvement, the systems of taxation that should be employed in so n country and city to distribute justly the burden of road and street improvement, and the legislation that is required to further these ends. Competition is open to all. Further information may be obtained by addressing Professor Richard T. Ely, Baltimore."

THE efforts of the farmers of Ohio to have the legislature pass laws equalizing the burdens of taxation, will result in good, whether the bills introduced pass or not. It is frequently asserted that the farmers of the state own less than half the property but pay over two thirds of the taxes. In their efforts to have other citizens pay their just share of the taxes, a bill was presented that the manufacturers kicked against vigorously, on the ground that it involved double taxation. Their action should arouse every holder of mortgaged property. Every one of them bears the unjust burden of double taxation. While the subject is uppermost is the time to strike. Our whole system of taxation needs a thorough overhauling. One of the leading political dailies in the state makes the suggestion that the legislature pass an act providing for a commission to be composed of merchants, manufacturers, farmers and business men of all kinds, whose duty it shall be to study the tax question and report tax reform measures to the legislature at its next session. The suggestion is a good one.

THE Census office has recently issued a bulletin on truck farming. The returns show that over \$100,000,000 is invested in this business, that 534,440 acres of land devoted to it realize annually over \$76,000,000. The following shows the acreage of the leading vegetables grown on truck farms: Asparagus, 37,970; beans, 12,607; cabbage, 77,094; kale, 2,962; celery, 15,381; cucumbers, 4,721; beets, 2,420; spinach, 20,195; Irish potatoes, 28,046; sweet potatoes, 22,802; peas, 56,162; water-melons, 114,381; other melons, 28,477; miscellaneous vegetables, 82,601.

FARM AND FIRESIDE.

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any but reliable parties; if subscribers find any of
them to be otherwise we should be glad to know it.
Always mention this paper when answering advertise-
ments, as advertisers often have different things ad-
vertised in several papers.

Our Farm.

SOME HINTS ON LAYING OUT GROUNDS.



HERE is before me
a request from
a gentleman in
Idaho for a plan
for a house and
surrounding
grounds, to be
furnished
through the col-
umns of FARM
AND FIRESIDE.

The letter contains no hint
of how the ground lies, of its surface con-
figuration, or whether it is in city or
country. It is under these circumstances
about as difficult to furnish a plan exactly
adapted to the grounds as to fit a person
with a suit of clothes without knowing
either sex or age.

It is, however, possible to give general
instructions that will not only help this
inquirer, but all others wishing like aid.
In doing this it will not be out of place to
remark that landscape gardening is the
art of combining beauty with convenience.
Not a single rule of the art needs to clash
in any way with the convenience or com-
fortableness of a home. It often results
in exactly the opposite, increasing the con-
venience and capabilities as well as the
comfort of a home and its surroundings.
Some of these facts I think I can prove
without writing a book or trespassing on
the forbearance of the editor. In doing so
I shall be compelled to embrace a great
deal in a little, and so have put more
lines into one drawing than I would pre-
fer.

Fig. 1 represents a nearly level plot of
11 rods by 17, containing 187 rods of
ground. The house, H, is about 90 feet
from the sidewalk and a little to the right
of the center of the lot, the other way. It
is supposed to lie on the west side of a
north and south road, and to be situated
in the outskirts of a village or in the
country where a carriage drive and barn
are necessities. According to the old-
fashioned utilitarian ideas, the drive should
enter at Y and run straight back to the
barn, A. Curved lines are, however, pret-
tier than straight ones, and we wish to
get a little more lawn in one piece, so we
move the gate over to X and gently curve
the drive until it strikes the straight
drive opposite the rear corner of the
house. From here it can go straight back
to the barn or it can curve in the form of
X F J and enter the barn from the north,
or the barn could be placed at C and
entered at the east end. Again, a curve
could commence at D and enter the barn,
C, on the south side; or supposing the barn
to be at B, the drive could be continued to
enter that on the east; but if the barn was
to be at B, the prettiest form of drive
would be as located at X F X. This is

graceful throughout and almost a direct
line from the entrance, X, to the barn. In
taking the entrance at X, two things are
taken into account. Being the south side
of the house, it is supposed that the living
rooms will be most conveniently reached
by having the drive on that side. Again
it is supposed that the village lies to the
south and most of the driving will be in
that direction.

It may be, however, that the village lies
to the north, and all other conditions re-
quire the drive to pass the house to the
south. In this case the entrance could be
at Z. If, however, the arrangement of the
house is such as to permit the drive to
pass the house on the other side, the ar-
rangement of the grounds may be exactly
reversed and the main entrance be at K.
It will be noticed that a short road leaves
the main drive at R and passing toward
the house at S, turns in a circle to the
drive again. This is for a carriage turn
for the use of temporary visitors, a hitch-
ing post being planted in the edge of the
orchard to the south. The pointed, pear-
shaped figure, I, is a group of shrubbery or
flower beds, and it will be noticed that
while it is closed to the turn on the north
side, on the opposite one there is left a
strip of grass between the point and the
drive. This will be explained farther
along. The dotted lines from W to N and
from the house to U, T and Z are with re-
ference to views left unobstructed by plant-
ing. The dotted line, commencing at P
northwest of the house and
running through U T
and intersecting the front fence
north of Z, and then be-
ginning again at Y and run-
ning through W, ending at
Q, indicates the outline of
lawn as bounded by orna-
mental planting. A study
of the curved lines of the
plan will show their value in
several ways. Leaving out
of the question its grace
and beauty, it will be per-
ceived that a curved line
gives a great latitude of
choice in place of entrance
and still makes it possible
to get near the house with the
drive. On passing the house
such a line gives a wonder-
ful choice in the location of
the barn, it being possible
to reach it from any side in
any position.

The principal objection
that I have met with in the
use of curved drives and
walks, is that they leave
irregular plots of ground
without right angles on
right lines and therefore do
not easily fit into the square
plow fields adjoining.
When, however, we consider
the subject in all its bear-
ings, this is no objection
whatever.

A home without a vegetable garden and
more or less fruit around it, is of little value
to most people, and it is by the aid of
these that home surroundings are made
to fill out the full measure of the allotted
ground and still not interfere with the
rectangular fields adjoining.

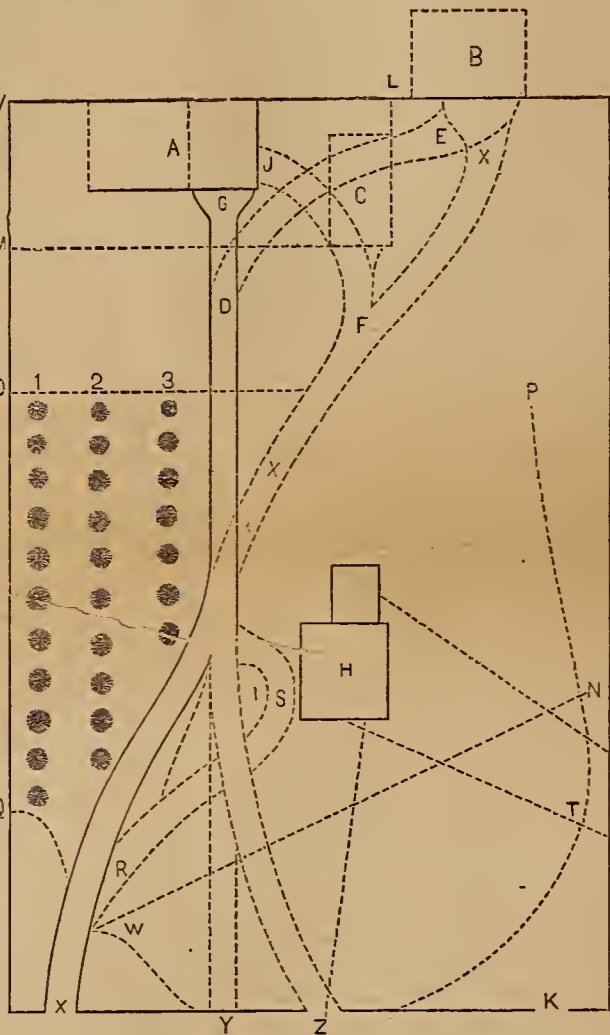
In the plan we are considering the piece
of ground south of the driveway, from Q
to O, is devoted to fruit trees. It makes an
agreeable shaded piece of ground that does
not require to be separated from the lawn
by a fence. There are three rows, and it
does not in the least effect their value that
row 3 is shorter by three or four trees
than row 1. The trees must be plowed
and cultivated in strips and the driveway,
if care be used, can be made a turning
ground, or a strip of lawn a rod wide
(which is better) may be left to turn upon.
Such plots of ground planted to apple,
pear, peach, plum and quince trees, are
ornamental in bloom and fruit, and those
nearest the house may be of the smaller
varieties so that the plantation shall rise
in height as it recedes from view. Back
of this there may be a garden and barn-
yard, the outside lines being right ones,
only one boundary being irregular—the
one next the curved drive. The other
side of the drive may be devoted to other
necessary buildings, or to more fruit trees
set so as to utilize the ground to the best
advantage.

In this connection it may be remarked

that nature seems to have especially de-
signed some fruits to occupy the border
land around dwellings; cherries, pears
and quinces thrive and bear fruit in the
grass if it is only reasonably rich and
well drained, while peaches and apples
seem content if only a few roots reach into
cultivated soil. As the irregular plots in
home lots are not necessarily large, it is
easy to so arrange that there shall be no
waste, or idle ground. The curved lines
harmonize with the outlines of trees and
shrubs and it is possible to get much more
onto a given area than if everything was
planted after the old rectangular or
checker-board system. Of course, it is
not calculated that numerous fences shall
divide up the dooryard. Where it seems
best to have a garden inclosed with
pickets it may be located at the rear with
three rectangular boundaries of pickets,
while the fourth, adjoining the drive, may
be of woven wire or of some kind of low
hedge following the curve of the drive.

In the plan, supposing the ground be-
tween V and M to be barn-yard, that be-
tween M and O may be vegetable garden.
If my readers will carefully consider what
I have written on this subject, I think they
will be enabled to lay out the drives of a
new place or change those of an old one
so that they will not only be more con-
venient, but much more in harmony with
the laws of grace and beauty than is gen-
erally seen.

In another article I shall try to give



some general hints on planting and
grouping, illustrated with plans connected
with the one which I have used in this
one.

L. B. PIERCE.

SUGGESTIONS FROM STATION BULLETINS.

BY JOSEPH (TUISCO GREINER.)

BLACK KNOT OF PLUM AND CHERRY.—In
many localities where plums and cherries
used to be grown in great abundance and
perfection, their production has become
almost impossible on account of the black
knot. This is a disease caused by a low
form of vegetable growth, or fungus, and
it has been given full sway for so long
that great sections are thoroughly in-
fected. There the spores, or seeds of the
fungus, are present everywhere, so that it
would be difficult to find a spot where a
plum or cherry tree might be considered
out of the reach of infection. Now, plums
and cherries are among our most profit-
able fruit crops, if we can manage to
grow them, and a word of warning will
certainly be in order. This evidently is
the opinion of Prof. Byron D. Halsted,
who, in Bulletin 78, of the New Jersey
Experiment Station (New Brunswick),
gives a full description, with illustrations,
of the disease, and urgently appeals for
prompt and united action on the part of
the growers, and if necessary, for legis-
lative interference.

This black knot is a greater danger to
our cherry and plum crops than curculio

or any other enemy. Utter ruination is
threatened, and immediate and thorough
action is absolutely necessary. The diffi-
culty in dealing with this disease, is the
fact that while one fruit grower may do
his part bravely and faithfully, his neigh-
bor or neighbors allow their trees to
breed the spores and contagion for
the whole neighborhood. On the whole,
I do not believe in looking to the en-
actment of special laws as the first rem-
edy for every little difficulty that we may
encounter. Self-help is most efficient in
the majority of cases. But in the present
instance self-help is impossible, so long
as the neighbor furnishes new enemies to
one's crops faster than one can destroy
them.

Life, liberty and the enjoyment of hap-
piness; these are the great fundamental
rights of American citizens. There are
people, however, who imagine that the
clause, "enjoyment of happiness," in-
cludes the right to do pretty much as they
please, and to trample on the rights of
their neighbors. This is a mistake. No
man has a moral right to pollute the air I
have to breathe with tobacco smoke, if
that is offensive to me; or to seed my
fields, that I am taking great pains to keep
clean, with thistles; or to allow his dogs
to run at large and worry and kill my
sheep; or to infect my orchards and fruit
patches with all sorts of insects and
diseases.

If a person is too shiftless to fight the
enemies of the crops, and thus breeds
trouble for his neighbors when the latter
are doing their part to clear the neigh-
borhood of the pests, such a man should be
forced by law to abolish the nuisance, or
be held responsible for all damage. This
is no more than right, and it ought to be
law. It is true, I was not always much in
favor of the peach yellows law in this
state; but this was only because it is a fact
that many of the trees which are said to
be afflicted with the yellows have no such
disease, and can easily be cured by proper
application. Still, this law has had good
effect, and where strictly enforced, it soon
wipes out the yellows and again makes
peach growing practicable.

The plum knot, however, is easily re-
cognized by anybody, and the destruction
of the entire tree is seldom required.
With a little united effort on the part of the
growers, it could soon be wiped out, at least
to such an extent as to again make the
production of plums and cherries possible
in the districts where it is not now. A
simple law, strictly enforced, making it
obligatory for all growers to keep trees
and premises free from the black excres-
cences, in any way they please, would
have the desired effect.

The remedies to be proposed, says the
bulletin, are few in number and easily
applied. The old one of removing all the
knots with a knife and burning them, is
highly recommended. However, when a
tree is thoroughly infected, it is not easy
to cut far enough below the excrescence
to remove all the fungus. The writer has
frequently seen vigorous trees, highly
prized by the owner, so severely pruned
as to leave only a few stubs in place of the
branches, and upon the tips of each the
next season would grow knots of consid-
erable size. In all such cases there seems
to be only one thing to be done, and that is
to remove the whole tree and burn it—the
sooner the better.

At the Massachusetts Experiment Sta-
tion the application of various substances
to the knots has been fully tested. Thus,
linseed oil, turpentine and kerosene were
severally applied to the galls to satura-
tion, with a brush at different times dur-
ing the summer. They all effectually
destroy the plum wart, but the turpentine
and kerosene must be used with great care,
or the branch will be killed. No injury
follows the application of linseed oil. It
is suggested (in bulletin No. 4) that a so-
lution of sulphate of copper, applied with
a hand-pump early in spring to the whole
tree, and more concentrated with a brush,
to the forming galls later in the season,
may prove effective. In Bulletin No. 6,
the painting of the knots with a mixture
of red oxide of iron in linseed, is stated,
has given good results.

WIRE-WORMS.—For many of our efforts
made for the purpose of discovering rem-
edies for injurious insects and plant dis-
eases, we have absolutely nothing to show
but negative results. And yet, even these
are often of value, in so far as they show us

in what direction it is useless to look for relief. The entomologist of Cornell University Experiment Station (Ithaca, N. Y.) tells in the third annual report, for 1890, that the most extended of his experiments with insecticides have been those upon wire-worms, especially the millipede (thousand-legged worm), so destructive to melons, etc. The results have been rather discouraging, and indicate the futility of nearly all of the commonly recommended methods of fighting these pests. We have determined, the entomologist says, that our most common species of wire-worms cannot be destroyed by the use of salts not injurious to field crops. Although the knowledge does not aid us in combating the wire-worms, it will save the wasting of salt in futile efforts to destroy these insects. It is only possible that the use of salt results beneficially by driving the worms deep into the soil, and thus giving the young plants a chance to start. The impracticability of starving wire-worms in the soil by sowing either buckwheat or mustard, as is often recommended, or even by starving them by clean fallow, has also been demonstrated. By fall plowing, however, many full-grown insects can be destroyed in the soil and their numbers greatly lessened the following season.

SILO AND ENSILAGE.

The immense good now being derived from the modern wooden silo, and the demonstration of its probabilities being so pronounced and truthfully vindicated, every practical or sane farmer should no longer hesitate to accept of the evidence as truth, and govern himself accordingly. No farmer raising cattle for beef, sheep or hogs for breeding purposes, or the great dairy business of this country, can afford to be without them a single season longer.

The cheap wooden silo and fully-matured corn ensilage make all the above

tion with the above costly structures, that has, after all, done good by paving the way for what is now a certainty, and within the easy reach of all farmers. These heavy-walled pits are great absorbents of heat from the ensilage, and consequently reduce the temperature of the ensilage around the sides of the pits, so it detracts from its quality and sometimes causes decomposition and loss; which will never occur with a single-thickness, one-inch-board ceiling for a silo.

In constructing silos, a great variety of places in every farm barn may be found practical and convenient, and by the use of them there is great saving of room in our barns that has usually been used to store coarse fodder used for feeding purposes. If I were to build new barns, I would most assuredly build all silo pits on second floor of my barn, using the entire basement story for stable room for cattle. Mr. Edgar Huidakoooper, of Meadville, Pa., has lately built an immense cattle barn for feeding purposes, with silos eighteen feet deep on second floor. My own home barn has four silo pits on second floor, twelve feet deep, and might be three feet more; while my entire stone basement story is used for stabling forty head of cattle underneath the pits.

You will all need the extra stable room who adopt the silo, because it will double the capacity of your farms over the use of dry fed, hay, grain and pasture grass. A single animal to each acre of cleared land is possible on most of our Ohio farms; but the majority of farmers will be content with one animal of the cattle kind to each two acres of land, and that number will nearly double the stock of Ohio farms. This increase will be made the second year any farmer adopts the wooden silo, and the large variety of corn for ensilage, grown to full maturity.

The size of silos must be regulated according to the number of head of cattle you are to feed. Uncover and feed from one pit at a time, raking off the top of the ensilage evenly in the pit, from commencement to close of it. Never rake off a feed ahead, and so let it cool for hours out of the pit; but take it fresh from the pit both night and morning. At noon feed to cattle a good ration of clover hay, which, with a good, big bushel-basketful of the cut ensilage night and morning, makes sufficient grain ration to keep them thriving all the time. Dairy cows will give a large and constant flow of milk in winter, when it is most profitable. The clover feed at noon makes a fairly balanced ration that produces grand results, and is within the easy reach of the farmer to produce himself, from the farm.

He does not need to buy a cent's worth of oil meal or any prepared food stuffs for cattle. He has all the needed feed at home, if he only manifests the *git* and enterprise that is due from every tiller of the soil to-day. Twelve acres of good, large, white, southern corn, grown upon my farm to near full maturity, produces fully one hundred bushels of ear corn per acre. This grain, with the stalks, leaves and all, is cut up finely with a heavy machine, the Ohio pattern of the Silver Manufacturing Co., and it puts the corn in splendid condition for cattle feed. The grain is cooked up soft and kept warm and moist all the time until fed, and is in its most perfect condition for mastication and animal digestion. No husking of corn or grinding, or drawback by miller's toll or waste of time in going to mill all winter long, about once in two weeks. Ten acres of clover hay, that produces twenty tons or more, will make, with the above-named ensilage feed, sufficient to winter my forty head of cattle six months each year, and its total cost does not exceed three hundred dollars, or eight dollars per head for wintering cattle. The summer feed should be a little less cost than this. Can you not see profit in the animal industry at this greatly reduced cost of keep?

I have done this business exactly as I now state it, for the past three years. I commenced five years ago with the wooden silo, and had never kept over fifteen to twenty head of cattle on the same land I now keep forty-two head, and more of other stock. I see greater profit every year—have doubled, yes, trebled

the quantity of manure. My fields are growing richer day by day, and I see no reason why others should not do the same and enjoy its benefits.

In every feed of my ensilage, night and morning, is fully four quarts of corn, cob and all, given to each animal, which is just a fair feed ration. Not sufficient, perhaps, for stall-feeding cattle or to develop the astonishment and wonder of the breeder's art; but it is just such a ration as will render the largest return possible from the farm in all regular beef, mutton or dairy farming. It is the only sensible and practical chance for the common farmer to advance without great risk or expense. The common wooden silo he can build himself, if necessary; or, at most, it does not cost over fifty cents per ton capacity for each silo, and will pay back its cost every year in saving of feed for cattle. No man on a cattle farm can afford to do without them. Next issue will describe the silo. H. TALCOTT.

ADJUSTABLE SAW-BUCK.

For the benefit of the boys who use a cross-cut saw at the wood-pile, Mr. T. M. Elder, of Nebraska, sends a description of an adjustable saw-buck. The ends are made of 2x4 scantling, three feet long, mortised together. They are connected by a piece of wagon-tire eight feet long. The cut makes no further explanation necessary.

NOVELTIES IN SEEDS AND PLANTS.

In looking over the columns of papers of all classes, one sees that our enterprising seedsmen and plant dealers know that the planting season is approaching. The illustrations and descriptions of wonderful novelties that are sure to be profitable for market grower and consumer, almost tempt me out of my usual conservatism. They would, if it were not so forcibly impressed on me by experience and observation. So I come again, in my yearly visit, to say to the readers of FARM AND FIRESIDE, to those who grow for market and home use, plant standard varieties. Let amateurs and professionals test novelties. Money

put into manure and tillage will yield better returns than when invested in high-priced novelties.

I do not say all novelties are unworthy. But no matter if a new strawberry is good, it will not pay anyone else than a plant grower to pay two dollars per dozen. The same may be said of raspberries, blackberries, or of grapes sold at one to two dollars per vine. Ninety-nine hundredths of the varieties introduced do not become standard, so anyone can readily see the large proportion of chances against them when investing in novelties. Many of these varieties offered have good qualities about them; but remember, they must endure the test that comes when planted on all kinds of soils and in the hands of all kinds of cultivators.

Here are the names that have passed this test most satisfactorily for a number of years:

Strawberries—Crescent, Haverland, Burbach, Warfield, Jessie, Cumberland, Snicker State.

Raspberries—Souhegan, Palmer, Ohio, Hilborn, Gregg, Turner, Cuthbert.

Blackberries—Snyder, Taylor.

Grapes—Concord, Worden, Early Victor, Vergennes, Delaware, Woodruff Red, Pocklington, Niagara.

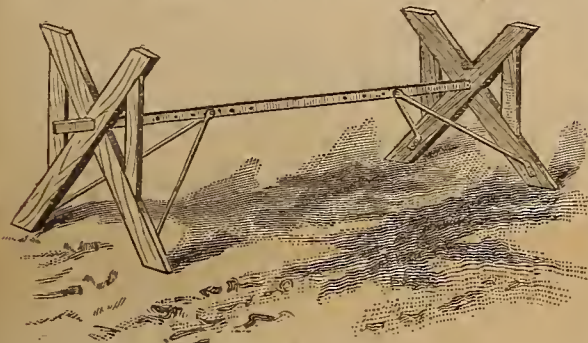
Currants—Red Dutch, Victoria, White Grape.

Gooseberries—Downing.

Some of the varieties now offered for the first time may prove as good as those named, but we are safe in assuming that not one out of twenty-five will, and even then it requires four to five years to discover which it is.

Strawberries do not grow on bushes, raspberries on trees, tomatoes and potatoes on the same vine, cranberries on bushes, huckleberries on any ordinary farm land, tomatoes on self-supporting bushes six to seven feet high. Custard Apple, Northern Banana and Papaw are one and the same thing. If there are any everbearing strawberries and raspberries that are profitable to grow, our experiment stations and wide-awake horticulturists know nothing of them. Sometimes the other fellow gets ahead of them, but in the end he is relegated to the rear by the kicks of a discriminating public.

THEO. F. LONGNECKER.
Montgomery county, Ohio.



ADJUSTABLE SAW-BUCK.

industries not only possible, but fairly profitable to-day, with present low prices of all farm productions. Farmers should begin to realize they live in an age of great progression. Every mechanical industry is at its utmost strain to produce its wares at the least possible cost. Inventive genius and philanthropy all combine to induce the manufacturers to give to the world the benefit of all this by the greatly reduced prices of their goods.

I bought a very good calico dress for my wife this week at five cents per yard; also, lately purchased good sheeting at four and seven eighths cents per yard. Our hardware store is to-day selling bar-iron at retail at two-cent per pound rates; old-fashioned, cut-iron nails at two-cent per pound rates; steel-wire nails, the present most approved nail, at 2.40 rates; all of them home manufactured, and at less cost than the government tariff on them. The age of competition is upon us, and all good citizens should manifest the same zeal and enterprise to cheapen cost of living; not excepting salaried men and officers, who will soon be squeezed into decent and bearable condition by their loving Alliance neighbors.

Farmers should no longer be exceptions. They are duty bound to accept all chances for advancement that will help to increase production and lessen cost, and do their share fairly to best, develop the vast resources of the most wonderful country and nation on earth. The cheap, single-ceiling, board silo is the greatest farm economy of the age for stock raising, and it is most surprising that farmers do not catch onto its benefits sooner and adopt them.

The heavy, stone-masonry silo, the thick-walled, concrete silo and the double-thickness, board-ceiling silo, either with or without paper between the boards, are out of date, and not up to the level of the best and cheapest wooden silo. Thousands of dollars were wasted by experimental

In Early Spring

Many people are troubled with dizziness, dullness, unpleasant taste in the morning, and That Tired Feeling, while there may also appear Pimples, Boils, and other manifestations of

Impure Blood

To all such sufferers we earnestly urge a trial of Hood's Sarsaparilla. No preparation ever received such unanimous praise for its success as a general Spring Medicine. It cures scrofula, salt rheum and every other evidence of impure blood. It overcomes

That Tired Feeling

and gives the whole system strength.

If you conclude to take Hood's Sarsaparilla, do not be induced to buy some substitute in its place.

Remember

That Hood's Sarsaparilla possesses curative power peculiar to itself. It is prepared by a peculiar combination, proportion and process, by which it retains the full medicinal merit of every ingredient used. Therefore we say, insist on having

Hood's Sarsaparilla

Sold by all druggists. \$1; six for \$5. Prepared only by C. I. HOOD & CO., Apothecaries, Lowell, Mass.

100 Doses One Dollar

Sold by all druggists. \$1; six for \$5. Prepared only by C. I. HOOD & CO., Apothecaries, Lowell, Mass.

100 Doses One Dollar

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

BUYING GARDEN SEEDS.—“Where does Joseph get his garden seeds?” asks an Iowa correspondent. Undoubtedly my friend looks for advice where he should buy his garden seeds. This I can give only in a general way. As for myself, I procure seeds of almost every prominent seedsman in the East and of some in the South and West. I have to do this as I like to try every new thing that is offered, good, bad and indifferent. Sometimes I desire to compare strains of the same vegetable as offered by different seedsmen. There is one place where I do not get seeds, however, and where I would not advise my friends to get them—that is at the grocery and hardware stores. The seeds kept on commission may be all right, but they are not reliable. They are seeds of the cheapest kind, and they are liable to be too old for use. I find that you run very little risk in buying directly of almost any one of the established seedsmen that advertise in the rural papers. These dealers are there to stay, and they could not stay long in the trade if they were to be careless or dishonest enough to send out stale seeds, or seeds that would not produce good vegetables. Like all other merchants, of course, they like to brag up their goods, and often claim them to be superior to those offered by anybody else. We must make some allowance for that. In fact, there is not very much difference in quality between the seeds offered by one reliable dealer and by another. Jones' Surehead cabbage and Brown's Surehead cabbage and Smith's Surehead cabbage, most likely, were all procured from the same cabbage-seed grower, and were taken from the same lot of seeds. So it may be with A's and B's and C's “first and best pea.” It is the same thing with our cauliflower varieties. Many of the varieties sent out by different dealers under what we might call “trade-mark” names, are from the same stock, grown by the same grower.

On the whole, I would buy my general line of seeds from any one among a dozen of seed firms just as soon, and with as much confidence, as from another of them. But I will not buy from any firm the statements of which arouse my suspicion. When I find in a catalogue extravagant promises of “the greatest novelty ever offered to the American public,” pictures of strawberry and blackberry trees, or of tomato trees, or of other wonderful, if not impossible things, I lose confidence at once, and certainly would not put my trust in the dealer's wares. I do not patronize such people myself, to any great extent, and do not advise others to do so.

WASHINGTON SEED SHOP.—The FARM AND FIRESIDE has been favored by a communication from Mr. O. D. LaDow, New York, in defense of the Department against the charge of sending out “poor seeds.” I am very thankful to Mr. LaDow for calling my attention to this matter. As usual I act promptly. Have at once sent a request to the Department for a lot of just such seeds as are sent to applicants in this part of the Union, and after I have convinced myself that others in this section receive the same seeds, I propose to put them to the test and tell my friends all about them. Mr. LaDow's letter reads as follows:

“I have just read in your issue of February 15th, the answer of ‘Joseph,’ to the inquiry of ‘C. G.,’ relative to the quality of seeds furnished by the Agricultural Department, of Washington, in which the statement is made that the seeds sent from the Department are ‘mostly ordinary, cheap stuff, of little value.’

I assume that ‘Joseph’ considers himself well posted on the subject of which he presumes to treat; but as an old friend of the Department, and professing to know considerable of its operations, I would advise him to have a five-minutes' interview with that model officer, Secretary Rusk, before furnishing further information about the Department. The fact is that no such line of seeds is distributed or sold, or disposed of in any way, as that now sent out from Washington, whatever may have been their value in years past.

To begin with, they are inspected, while growing, by a special agent; the greatest of care is taken in their selection, and after their receipt at the Department they are submitted to a crucial test to prove their genuineness,

their purity and their general worth. The kind of seeds that ‘Joseph’ refers to may possibly be sent occasionally to the Agricultural Department, but in that case the fraud is discovered and they are sent back to the shipper at his expense. No better seeds can be found than those distributed from the Agricultural Department, which assertion can easily be proven by a visit to that interesting place.

O. D. LADOW.”

In the meantime I will define my position in this matter. I have never had a word of blame for the head of the Department, as he is not responsible for the existence of what the agricultural press pretty unanimously was pleased to term, “the seed distribution humbug,” except in one case; namely, when the model officer, Secretary Rusk, promised to put greater efforts into that distribution and enlarge it as much as funds would allow, instead of recommending (as did his predecessor) the abolishment of the whole absurd business. Perhaps greater care is now being exercised than ever before in distributing seeds that will grow and bear a good crop. Still, the fact remains that these seeds are ordinary seeds, such as we can get from every seedsman, and they are sent out to the few at the expense of the many. This in itself is an absurdity, unless the institute is made one of charity, supplying seeds to farmers who are unable to buy them. In that case, again, why not extend it and distribute, also, fertilizers and tools and improved stock, etc., to those who are in need of them, but who have not the money to pay for them?

In regard to the introduction of new and improved varieties of seeds and plants, our seedsmen and nurserymen are equal to the task. They scour the world over and find and bring out pretty much all that is worth having. What great results has the Seed Division to show for its annual appropriation of more than \$100,000? Compare with this the grand outcome of the efforts made since Commissioner Colman's time by the Section of Vegetable Pathology. What a contrast! In one case a useless and wasteful expense; in the other, an amount of good too vast for computation.

Yet, after all, the sum absorbed by the Seed Division is insignificant; the injury (everything that is not just right is an injury) no more than a hardly perceptible pin prick into the agricultural body; and so long as the latter has to feel the real dagger stabs of political corruption and discriminating legislation, mere pin pricks will not command earnest attention. Still, I will not defend them.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Cranberries.—J. L. Cross Keys, Oregon, writes: “(1) Would it pay to plant five acres in cranberries if your market is fifty miles distant, if all other things are favorable? (2) How soon after planting do they bear? (3) How much can be raised per acre and about what price will they command?”

REPLY:—(1) Cranberries are so valuable that they may be shipped almost any distance to a market at a profit, if they can be raised in a favorable location. (2) If they are well cared for the first good crop should be produced in three years, but some the second. (3) The yield and price is variable, but they generally command from \$7 to \$10 per barrel, and successful growers reckon on getting from \$300 to \$1,000 profit per acre.

Abundance and Spaulding Plum.—R. G., New Castle, Penn. The plums you mention are new varieties and not thoroughly tried. You had probably better “go slow” in planting many of them. Plant a few and find out for yourself their value. Both come well recommended. As for their “ability to resist the curculio,” you need not expect great things of it, for such claims are generally nonsensical. The curculio attacks all plums, but in some the eggs do not appear to hatch so readily as in others. I am well acquainted with the South American type of plums which are generally considered curculio proof, and yet I would not recommend them for planting in Pennsylvania, for the old standard sorts are much better and only need watching to prevent the work of the curculio.

Pruning Trees.—J. R. G., Brownsville, Tenn. The method of pruning trees depends upon the object had in view and upon the kind of trees. If you will specify what kind of trees you desire to prune I shall be pleased to answer you more definitely. In a general way pruning should be done to keep the trees of good form. Interlocking and dead or decaying limbs should generally be removed, and all wounds over one inch in diameter should receive a coat of paint. In taking off limbs use pains to make the smooth cuts with sharp saw or knife. Do not cut off limbs close up to the trunk of a tree nor yet far enough

away to leave a stub, but cut it off just where the swelling from the main trunk begins to decrease in size. Pruning can be most successfully done while the tree is dormant (from October to March); but perhaps the poorest time of all to prune is in the spring when the sap is running freely, at which time fresh wounds do not heal over readily. Pruning should not be done in summer, as the removal of foliage from trees checks their growth.

Best Fertilizer for Blackberries.—A. S., Tonganoxie, Kan. It is almost impossible to answer such a question intelligently without knowing more definitely the present productiveness of your soil, its past treatment and geological formation. I think that probably good stable manure and high cultivation is all that is needed for your soil and crops. But as you wish me to recommend you a special fertilizer, I recommend you to use wood ashes, at the rate of thirty bushels per acre. Another fertilizer which is more complete, but probably too expensive for you to use with any profit, is made by mixing 250 pounds of fine ground bone, 100 pounds of high-grade muriate of potash and fifty pounds of nitrate of soda and using the mixture on one acre. Probably there is an abundance of old bones to be obtained in your locality. If these are ground or even broken up and piled in heating manure for a long time, they make manure very rich. There is probably so much waste material in your immediate locality that it would be foolish for you to buy expensive commercial manures. You may find that all your berries need is a good mulch to make them bear heavily. One of the best manures, and which acts also as a mulch, is green clover. This should be applied about six inches thick for several years. It rots on top of the ground and soon becomes the best of plant food. Probably Chicago is the most accessible point at which you can procure fertilizer. It will cost about \$35 per ton.

Preventing Flow of Sap to Buds.—C. M. D., Ind., asks if it would not be practical to prevent peach buds killing by preventing the flow of sap to the buds, by putting around the tree an iron ring that could be tightened at will.

REPLY:—This query undoubtedly comes from one who regards the circulation of the tree as being similar to that of animals, which it resembles scarcely at all. If it were possible to prevent the circulation of sap by this method, the cells would be crushed in the bark and wood before they were so tightly closed as to prevent the passage of the sap up from the roots, and rot would follow in a short time. But the circulation of the sap in trees from the roots is not necessary to start the buds. Single branches, when cut from many kinds of trees, will start their buds if brought into a warm, moist room and soon be in bloom. The sap that starts the buds on the trees in the spring may be simply the water in the stem which has dissolved the plant food stored up in the stem the preceding year, and is forced to the buds by the expansion of the air in the inter-cellular spaces in the stem. One must understand clearly in this connection that the roots do not make sap or take prepared sap from the soil, but that the sap must first pass to the leaves, where its make-up is completed by having added to it material which the leaves take from the air and by being partially evaporated. Further, since in the spring the tree has no leaves with which to prepare sap, the tree or plant provides for the case by storing up prepared plant food in the stem with which to sustain the trees until leaves are developed. When a maple tree is tapped in the spring we take from the tree prepared plant food which we call sugar sap; and this was stored up to start growth in the spring. A potato is simply an underground stem in which much-prepared plant food is stored up to start growth in the spring. The same is true of all plants that live more than one year.

Seedlings True to Name—Whole Root Grafts.—A. B. S., Nokomis, Ill., writes: “(1.) There are, just now, men claiming to sell seedling peach trees, true to kind, being obtained by enclosing tree, during blooming, in gauze, and so preventing cross fertilization. They are also selling apple trees said to be propagated from whole root grafting, claiming they will be more vigorous and longer-lived than when piece root grafting is practiced. Will bi-sexual fruit bloom fertilize themselves in confinement; that is, where the agency of insects is shut off? (2.) Are whole root grafts better than piece root? If so, would it not be better to raise seedlings true to name, notwithstanding the time lost in fruiting?”

REPLY:—(1.) The pollen of the peach is largely distributed by the wind and also by insects, so that the simple covering of the tree with gauze will not keep out pollen from near-by trees, for it will work through an ordinary gauze coverlug. But if no other pollen was near, the tree would fertilize itself, as the pollen would be scattered by the winds inside its covering. Such claims are often made by growers, but all who have had any experience in the matter are agreed that even if a plum or peach tree is isolated, it does not follow that the seed will produce like the parent plant, although there are several varieties of both peach and plum that come nearly true from seed. (2.) Whole roots give the scions a better growth at the start, and many good nurserymen think they make better trees than piece roots. This is still a disputed question, with the weight of argument in favor of the strong, thrifty, healthy tree, by whatever system grown. For a very severe climate, like that of Wisconsin, Minnesota, etc., it is without doubt best to use piece roots and a long scion, and so

get the trees on their own roots as soon as possible. In some parts of Europe they have found that trees on their own roots are hardier and longer-lived than trees on seedlings. I think that if only American-grown apple seeds were used for growing the seedling roots, instead of French crab seedlings, which are much used now, we should get much better and surer results from grafting. If it were possible to grow all apples true to name, from seed, it would be the best way. The Nickajack is a variety which has produced many seedlings almost identical with itself, but is the only one I know of that has ever come true from seed.

INSECTS ON FRUIT TREES

Can be destroyed by spraying with London Purple. Diseases of grape vines can be checked by spraying with Bordeaux mixture. The Field Force Pump Co., of Lockport, N. Y., manufacture the Knapsack Sprayer and a full line of Orchard and Vineyard Outfits. Write them for circulars and directions.

\$17 Spraying Outfit \$5.50
Express Prepaid, for
Combines 3 Complete Brass Machines.

A valuable illustrated book free—“Our Insect Foes.” Goods GUARANTEED AS REPRESENTED OR MONEY REFUND. Get my illustrated catalogue before buying a spraying outfit. Write at once and mention this paper. Address P. C. LEWIS, Catskill, N. Y.

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12 Pkts. FLOWER SEEDS 10c.
H. F. BURT, Taunton, Mass.

SUGAR MAPLE TREES.
Large and Small. 100,000 Seedlings for Transplanting, \$40. Large Street Trees very cheap. Catalogue Free. **GEO. PINNEY, Evergreen, Wis.**

850,000 GRAPE VINES
100 Varieties, Also Small Fruits, Trees, &c. Best rooted stock. Genuine, cheap. 2 sample vines mailed for 14c. Descriptive price list free. **LEWIS ROESCH, Fredonia, N. Y.**

GRAPE VINES, Strawberries, Blackberries, Raspberries, Currants at reduced prices. Write for New Catalogue of Nursery Stock, Fruit and Garden SEEDS, with instructions for pruning, planting, &c. **JOEL HORNER & SON, Delair, Camden Co., N. J.**

100 PER CENT PROFIT GUARANTEED
To all who intend to plant Fruit and Ornamental Trees, Shrubs, Vines, Roses, etc., if you will give me your name and P. O. address on postal card directed to **J. Hammond, Nurseryman, Geneva, N. Y.** Mention this paper when you write.

NUT TREES. Chestnuts—Japan Mammoth and Giant, Parry's; Japan Walnuts; Japan Golden Russet, Idaho and Kieffer Pears; Eleanus Longipes, Hardy Oranges, and other valuable varieties. Small Fruits, Grapes, &c. Fruit, Shade and Nut Trees, Ornamental Shrubs, Vines, &c. Illustrated Descriptive Catalogue Free. **W. M. PARRY, Parry, New Jersey.** Be sure to mention this paper when you write.

\$100.00 PRIZE ONION
THE universal favor accorded TILLINGHAST'S PRIZE SOUND CABBAGE SEEDS leads me to offer a P. S. GROWN Onion, the finest Yellow Globe in existence. To introduce and show its capabilities I will pay \$100 for the best yield obtained from 1 ounce of seed which I will mail for 80 cts. Catalogue free. **Isaac F. Tillinghast, La Plume, Pa.** Don't fail to mention this paper.

THREE GRAND BERRIES.



All are fully illustrated and described in Lovett's Guide to Horticulture. Also all good old and choice new varieties of Small and Orchard Fruit, Nut and Ornamental Trees and Plants, etc. It is a book of over 80 pages, finely printed and copiously illustrated. It states the defects and merits, gives prices and tells how to purchase, plant, prune and cultivate. Mailed free; with colored plates 10c.

Trees and Plants by Mail a Specialty.
J. T. Lovett Co., Little Silver, N. J.
Mention this paper when you write.

BEEES There is money in them if rightly handled. Write **W. W. CARY, COLRAIN, MASS.,** and see what he will send you free. Mention FARM AND FIRESIDE when writing.

WHAT IS THE MATTER WITH THIS? W. Kimble's Iron-Clad Stone Boat. An implement used by every farmer and guaranteed to give satisfaction for the purpose designed. For descriptive circular and prices inquire of your dealer or write to **W. KIMBLE, Manchester, Mich.**

STAR BAIL CHURN.
Best Churn in the World.
A child can work it. No churn cleaned so easy. No dashers or paddles, no inside fixtures. Will make 10 per cent more butter. One or two churns at wholesale prices where we have no agents. Write for catalogue \$3 and prices. **AGENTS WANTED. JOHN McDERMID, Rockford, Ill.**

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

EXTRACTS FROM CORRESPONDENCE.

FROM WISCONSIN.—We are having a large immigration from the East, buying up our lands at \$3 to \$5 per acre for level, rich, sandy loam soil, free from stones. Improved farms can be bought for from \$5 to \$10 per acre. This is the place for men of small means.

Stevens' Point, Wis.

G. W. H.

FROM WASHINGTON.—I would like to say a few words in regard to the correspondence from Waverly, Washington. While what the gentleman says is no doubt true as to his part of the country, the chances are all in favor of the man who comes to Lincoln county expecting to find government land. There is much of it here yet and as fine land as there is in the state. Those who own farms in the East had better stay with them, but those who are renting cannot do better than come here and secure a home of their own.

L. S.

Leman, Wash.

FROM OREGON.—We had a very open, pleasant winter, with but very little snow. Stock of all kinds wintered nicely, and as hay crops were good last season, stockmen had an abundance of hay to carry them through. We do not raise much grain in this part of the state. Stock raising is the principal industry here. Most of our stockmen raise alfalfa hay, which yields from four to seven tons per acre. I have known as much as twelve tons to be harvested from one acre in three cuttings. Times are rather dull here at present.

Express, Oregon.

E. G. C.

FROM ILLINOIS.—Southern Illinois is a good country. We raise plenty of all kinds of grain, and this is the garden spot of the world for fruit, such as apples, peaches, pears, plums and cherries and all kinds of small fruit. Some are setting out from 60 to 200 and 300 acres in fruit. We have the very best quality and it brings the best prices. If anyone wants a good home, southern Illinois is the place. Good land ranges from \$15 to \$30 per acre. We have a good stock country. We have commenced to pay a great deal of attention to sheep raising.

West Salem, Ill.

W. D. W.

FROM ILLINOIS.—Jefferson county is a good farming country; it has plenty of good timber. We raise all kinds of vegetables, and a better place for all kinds of fruit cannot be found. Anyone that is good at farming can do well here. The price of land ranges from \$5 to \$30 per acre, owing to location. You can buy well improved farms for \$30 per acre. Mt. Vernon, the county seat, is a lovely city of 5,000 inhabitants. It has three railroads and is soon to have another. The Air Line car shops are located at that place and employ 500 men. Wheat is looking well. Jefferson county is a nice place to live in. It has a good, healthy climate and good, sociable, friendly people. Those looking for homes can do no better than come here.

Woodlawn, Ill.

M. L.

FROM MINNESOTA.—I am much interested in the extracts from correspondence. We, in Wabasha county, have had a splendid fall and winter, no cold weather or snow up to February 1st, then a foot of snow fell, followed by cold. February 4th at my home it was 34° below zero. The land here is very good. Wheat, oats, barley, corn, rye and potatoes are the principal crops. Wheat is worth 80 to 90 cents per bushel; barley, 50 cents to 60 cents; corn, 35 cents; oats, high and scarce; hogs, live, \$2.90, dressed, \$3.50; eggs, 18 cents per dozen; butter, 15 cents to 18 cents per pound. Eastern people here miss fruit, as apples, etc., do not do well. I should like to live where fruit is abundant.

Lake City, Minn.

L. E.

FROM MISSOURI.—Knox county is situated in the north-eastern part of the state, and has a population of over 13,000. Land is worth from \$22 to \$40 per acre, and is mostly prairie and well watered. Farming and stock raising are the principal pursuits. There is more timothy seed exported from Knox county than from any other county in the United States. Edina is the county seat and largest town. The stock shipments from this point for three months ending January 31st last were: horses, 67; cattle, 1,082; mules, 49; hogs, 6,025; sheep, 141. This county is well supplied with railroads, churches and schools. Our people are law-abiding, energetic and prosperous. Cyclones and blizzards are practically unknown.

Edina, Mo.

C. T.

FROM IDAHO.—Nez Perces county is situated in the northern part of the state and is one of the richest in agricultural products. Wheat yields from twenty to eighty bushels per acre, averaging thirty-five bushels. Our climate is mild and healthful. Our spring weather in winter has been a constant source of wonder and surprise to newcomers. Our winters are mild; the summers are not so hot as to be oppressive; no one has ever been sun-struck here. Lewiston, the principal town in this county, contains 2,000 inhabitants and is one of the prettiest towns in the North-west. It is situated at the confluence of the Snake and Clearwater rivers, at the head of navigation. We have no railroad yet, but the grade is finished ten miles from the town and we expect the cars in here soon. We expect the

State Agricultural College to be located here, and a bill before legislature recommends Lewiston as the proper place for a presidential post-office. The year 1891 will probably see this city one of the most flourishing cities of the North-west. A company is putting in water and electric light works at a cost of \$100,000. Magnesla limestone has been discovered near here, equal to or better than the famous Kansas rock. Laborers get from \$25 to \$40 per month on the farm; miners from \$3.50 to \$4.50 per day.

Lewiston, Idaho.

J. M.

FROM ARKANSAS.—Carlisle, thirty-five miles east of Little Rock, is a thriving town of about five hundred. It has four churches, two white and two colored, five schools, steam gin and grist-mill, several stores and the only successful creamery in the state. We raise all kinds of fruit, cotton, corn, millet, sorghum, wheat, peas, etc., and prairie hay. This is as healthy a location as there is in the state. Grand Prairie is settled mostly by northern people. There is room for many more. We have mild, short winters and no hotter summers than Iowa or Illinois. Land can be bought at from \$5 to \$20 per acre, according to improvement. To the man who is renting high-priced land we say, come and secure a home of your own while there yet is room. And to him who is tired of wearing an overcoat every time he goes out doors, we extend the invitation to come to the sunny South.

Carlisle, Ark.

E. S. M.

FROM MASSACHUSETTS.—This beautiful town, nestled among the celebrated "Berkshire Hills," is six miles long and three to six miles wide. Lanesborough is one of the most delightful towns in Berkshire county. It is located at an altitude of from 1,200 to 2,000 feet above sea level, near the head waters of the Hoosic and Housatonic rivers—the one, running northerly, empties into the Hudson above Troy; and the other runs south and empties into Long Island Sound. The Housatonic river, in the southerly part of the town, spreads out into a broad and beautiful sheet of water, which bears the name of "Pontosic Lake." It is stored with pickerel, perch, bass and other kinds of fish. The delightful groves upon its shores, with roomy pavilions, a variety of rowboats, sail and steamboats, for the accommodation of the public, make it a popular place of resort. The town of Lanesborough has a population of about 1,300 inhabitants, with good schools, a public library of over 1,400 volumes, four churches (Congregational, Episcopal, Baptist and Methodist), and a well-kept hotel. The view obtained from some of the surrounding hills is delightful, and the lover of the wild and picturesque is never wearied with the prospect. They also furnish some of the most desirable sites for the summer residences to be found in Berkshire county. The roads are good, and the drives to Hoosac Tunnel, Greylock, Williams college, Windsor Falls, Wizard's Glen, Balance Rock, Potter mountain and neighboring towns, are charming in the extreme. This town, with its clear, running streams, excellent water and bracing atmosphere, is noted for its healthfulness, and is well worthy the attention it is receiving as a desirable place for summer recreation.

Lanesborough, Mass.

J. A. R.

FROM CALIFORNIA.—Lassen county, situated in the north-eastern part of California, for health, wealth and cheap homes, cannot be surpassed. We raise all the hardy fruits, such as apples, pears, plums, peaches, quinces, nectarines and all of the small fruits of the berry kind. Our fruit, for flavor, size, quality and quantity, cannot be beaten. We raise all kinds of grain and hay; harvest three crops of alfalfa. We have plenty of timber, pine, fir, oak, cedar, etc. We have plenty of government land, farming, grazing and timber, which can be had for settling and paying government prices, \$1.25 per acre. We have a railroad, good schools and churches. We raise stock horses, cattle and sheep. We are extensively engaged in the dairy business. Our butter brings us the best price; we get now 28 cents per pound in keg, 32 and 35 cents in roll. Eggs are 20 cents per dozen. Anyone can raise poultry here, for we have no disease among them. Wheat is 1 cent per pound; rye, 1½ cents; barley, 1½ cents; oats, 1½ cents; hay from \$3 to \$6 per ton; good dairy cows from \$20 to \$30 per head; good work horses from \$75 to \$125; chickens, \$4 to \$6 per dozen; hogs, 6 cents gross. Good farming land with improvements can be had for from \$10 to \$50 per acre. We raise all vegetables, from the tender tomato to the hardy turnip, and get good prices for all. For those who love to hunt or fish we have unlimited range, bear, deer, grouse, quail, sage-hen, rabbits, etc., mountain trout, white-fish, suckers and salmon. Anyone looking for home and health can find it here if he is willing to do a reasonable amount of work for it. People coming here do not need a great amount of money, for land is cheap, timber is plenty and people can live cheaply. Our climate is good, not very cold in winter and never too warm in summer to sleep well.

Janesville, Cal.

J. B. R.

FROM SOUTH DAKOTA.—Charles Mix county, the garden spot of the world, is situated in the south-eastern part of the state, on the Missouri river, having about fifty-five miles river front. It has fine scenery, and plenty of

natural timber and wild fruits, such as plums, cherries, gooseberries and currants. A man with little means can start farming. If not able to buy, there are plenty of farms that can be rented. A man with some wealth can buy stock to feed and ship. Nearly everything the human family wants can be raised here. Our soil is of a black, loamy, rich color and produces a good crop of nearly everything planted. The climate is healthy. The water is good. The delightful autumn weather which we have, gives the farmer plenty of time to prepare for the winter. We have our drawbacks as well as every new country. The last two seasons have been rather poor, owing to the extreme dry weather, but have never failed yet to raise some wheat. Flax is raised extensively on new ground and commands a good price. We have a good, industrious class of citizens in this county. As to society, it is as good as can be found anywhere. We have good schools all through the county. The religious denominations are all well represented. One great disadvantage, is that we have no railroad in the county. Armour, S. D., is the nearest railroad point to this part of the county for marketing grain, distant thirty miles. The Farmers' Alliance is well organized in the county. An independent county ticket was placed in the field last election and every man but one on it was elected. South Dakota has also an independent senator. The artesian well question is drawing considerable attention at present. A company has been formed, machinery bought and wells are being put down at a lively rate. The majority of our farmers are too poor for much of this work at the present.

Edgerton, South Dakota.

C. F. O.

FROM TEXAS.—Hill county is situated in the central portion of the state, and belongs to what is known as the black belt, which extends from North Texas southward a distance of 200 miles, and is considered the richest agricultural part of the state. Hill county, however, is nearly equally divided between black waxie and sandy loam soil, and is therefore better suited to a diversification of crops than many of her sister counties of the famous black belt. Fruits and vegetables do fairly well here; the principal drawbacks are, they do not keep well through the long, hot, and generally dry summers. Through the spring and early summer vegetables are so plentiful that they are of but little value except for home consumption; but most of the

standard varieties rot and cannot be kept over for winter use. Taken all in all, it cannot be claimed that this is a first-class fruit and vegetable country. The principal field crops here are corn, cotton, wheat, oats, millet and sorghum, cotton taking the lead. Cotton yields from ½ to 1 bale per acre, ½ bale being about an average. Corn yields all the way from 10 to 75 bushels per acre; 30 bushels is perhaps an average crop. Oats make from 20 to 75 bushels per acre. Wheat growing in this immediate part has not proved satisfactory for a number of years. Millet and sorghum grow to perfection. The face of the country is smooth and almost entirely free from stumps and stones. All kinds of improved farm machinery can be successfully used. Any good farm hand can cultivate from 40 to 50 acres in corn and the cotton, and even more by hiring a little through the cotton chopping season. An average crop for one man is 10 bales of cotton, with corn and hay sufficient to run a small farm. Of course, one hand can make as much as two can gather. The price of lands here ranges from \$10 to \$30 per acre, and where it lies near the larger towns it runs as high as \$100 per acre. This county has four railroads, two trunk lines and two branch lines. I think society here will compare favorably with that of any of the states. Farm hands get from \$16 to \$20 per month, day laborers get \$1 to \$1.25 and board during cotton chopping and harvesting season. Cotton picking through the fall ranges from 50 cents up to \$1 per hundred, and board, owing to the amount made and the demand for pickers. The soil here is extremely productive; fertilizers are never used, except for the garden, and but for the fact that this country is subject to drouth and that crops are cut more or less most every year, the yield would simply be enormous.

Hubbard, Tex.

J. H. W.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the querist should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Poultry Journal Wanted.—N. C. F., Fairbank, Iowa. Send for a sample copy of the *Poultry Keeper*, Parkersburg, Pa.

To Kill Prairie Dogs.—R. E. H., Deerfield. Soak balls of cotton or yarn in bisulphide of carbon, and put them into the holes. Cover the holes up carefully, so that the fumes cannot escape.

Applying Nitrate.—A. D. W., Artondale, Wash., wants to know how to apply nitrate of soda to the soil and how to mix it.

REPLY BY JOSEPH:—Don't mix it. Sow as you would sow wheat by hand.

White-Wine Vinegar.—D. A., Cohoes, N. Y. To make white-wine vinegar, mash twenty pounds of raisins and add ten gallons of water; let it stand in a warm place for a month, and you will have a pure article of fine quality.

Mineral Rods.—T. F. W., Auburn, W. Va., asks if there is such a thing as a mineral rod, by which gold and silver can be located.

REPLY:—No. If there were, all the gold and silver mines would have been located long ago. This is one of the harmless humbugs of the good old days.

Breeders of Guernsey Cattle.—S. L. D., Martinsburg, W. Va., asks for the names of breeders of Guernseys. Address L. W. Ledyard, Cazenovia, N. Y.; Levi P. Morton, Rhinebeck, N. Y.; E. N. Howell, Poughkeepsie, N. Y.; G. H. Davison, Millbrook, N. Y.; or P. T. Clapp, Kenosha, Wisconsin.

Sorghum Cane for Fodder.—P. W. R., Christiansburg, Va. Sorghum cane makes excellent fodder. It has one advantage over corn; it will grow well in a drier season. Good crops have been grown in the arid districts of the west when the seasons were so dry that corn failed.

Fertilizer for Sweet Corn.—M. H., Pennsylvania, also asks what fertilizer should be used for sweet corn on sandy loam. Any high-grade, special vegetable manure, applied along the rows at the rate of five hundred to six hundred pounds per acre, and perhaps more, will help your crop. In some cases, even plain superphosphates would do.

Sorghum for Ensilage.—We have received several inquiries about the use of sorghum for ensilage, and would like to have replies from those who have used it. Sorghum is a valuable forage crop in sections of the country too dry for corn. We know of no reason why it would not make good ensilage, but before recommending it, would like to have the experience of those who have tried it.

Hen Manure and Unleached Ashes.—J. C. T., Richwood, Va., asks if hen manure and unleached ashes will make a good fertilizer for potatoes, strawberries and vegetables. Certainly. But do not mix them before applying. The ashes will set the ammonia free and much of it will be lost. Apply each separately and the soil will absorb and save the ammonia. Mix your hen manure with muck or dry dirt.

Silos and Silage.—M. E. N., Leetonia, Ohio, writes: "(1) Should ensilage be salted when put in a silo? (2) Will plaster and cement do for walls? (3) Is mixing the best way to take the ensilage out to feed? (4) Must the silo be watertight?"

REPLY:—(1) Ensilage is not salted. (2) Yes. (3) No. Take it off the top. (4) It need not be. Send to this office for "Silos and Silage." Price, 25 cents.

Source of Springs.—J. K., Freeport, Neb., asks: "Are springs supplied from the ocean or from rain? What is the source of water in artesian wells?"

REPLY:—Springs and wells get their supply from rain. Springs and artesian wells are supplied from reservoirs on higher ground, sometimes far distant. A text book on geology will give illustrations that explain artesian wells.

Onions after Onions.—J. K., Iowa, asks whether it is a good plan to plant onions in the same place year after year. It is not. Rotation is the best and safest way for all crops, with hardly an exception. Where the same crop, or plants of the same family, are planted year after year, insect enemies and the diseases of that particular plant usually soon accumulate, and make the life of the grower anything but pleasant and easy.

Onions from Sets.—G. H. A., Iowa, writes: "What success could I expect from Wethersfield onion sets of the size of a walnut?"

REPLY BY JOSEPH:—It depends upon what the querist intends to grow. If onion seed, he could grow it by planting such sets, for the majority would go to seed at once. Whether such seed be desirable or not, or could thus be produced at a profit, is another question. If bunching onions is what our friend is after, he would probably be disappointed by the outcome.

Fertilizer.—C. H., Wheatland, Iowa, asks: "What kind of commercial fertilizer would you recommend for spring wheat to apply on fall plowing? Where can it be obtained?"

REPLY:—You ought to be able to keep the land in good condition by the use of manures that are accessible in your locality; but for a commercial fertilizer we would recommend you to use dry tankage. This can be bought of your nearest rendering establishment. It may also be obtained from dealers in fertilizers in Chicago.

Tin Plate.—C. N., Darlington, Wis., writes: "What is tin plate? There is so much jangling in politics about it. Is it plain sheet-iron or is it already tinned when imported?"

REPLY:—Tin plate is a thin sheet of iron, coated on both sides with a thin film of tin. It is tinned before imported, and is ready for the tinner's use. The jangling is about establishing the industry of tinning the plates in this country. Within the past few months it has been established, and promises to grow until this country prepares all the tin plate it needs.

Permanent Pasture.—A. S. L., Hopewood, Pa., writes: "I have a piece of land I plowed last December and want to put it in permanent pasture. I want to sow it in oats and grass. Would you please inform me through your paper if it will hurt the set of grass to pasture it this summer when the oats get about six inches high? I do not care for the oats crop, so I get a good set of grass."

REPLY:—Sow a mixture of grasses early next spring, and do not sow oats at all. If the weeds come up, run the mower over the field. Do not pasture it until fall, and then very lightly. This will be your surest way to get a good, permanent pasture.

Night Soil.—Old Subscriber, Nutley, N. J., writes: "I have a lot of night soil, mixed with coal ashes, so it can be handled. For what crops is it best suited? Or what should I put with it to make it most suitable for corn, potatoes or grass?"

REPLY BY JOSEPH:—Night soil is a complete manure, and usually quite rich and valuable. If mixed with coal ashes, peat, dry earth or similar absorbents, so as to be inoffensive, it needs no other preparation or admixture, and it may be used on any of the general farm or garden crops with good results.

Second Crop Seed Potatoes.—R. W. H., Gate City, Oklahoma, writes: "May early crop of Irish potatoes be planted as seed for second crop same year? I have tried it two seasons in succession and failed to get a stand. A gardener suggested to me; let potatoes get ripe, lay up in the wind until the potatoes become green and they will come every time. How is this?"

REPLY:—Tennessee growers find it very profitable to raise a second crop the same year for seed. Your soil and climate may not be adapted to it. The plan of "greening" potatoes is followed by many successful growers.

Flax Straws.—M. P. G., Windsor, Mo., writes: "I think it my duty to correct a mistake, by someone, in the use of flax straw. The answer was that it was no good, which I know, by four years' experience and observation, to be a mistake. The chaff is very rich feed for horses or cattle. It will fatten dry cattle right along. We save all the straw carefully, and let the stock eat it down, in a lot for that purpose. When well rotted, it makes a rich manure to return to the fields. No danger of exhausting the soil by that plan."

REPLY:—It is the seed that is left in the chaff that makes it rich. The query answered was about the straw.

Killing an Osage-Orange Fence.—A. G. C., Millwood, Kan., in answer to a query, writes: "Killing out an old hedge fence (osage orange) is a serious undertaking. Grubbing out will rarely succeed, as the broken ends of the roots, that may run twenty or more feet away, often throw up new plants. The most certain plan is to go to your grocer and get him to save you the brine from the fish barrels. Cut the hedge to the ground in July or August, and pour from a pint to a quart of the strong brine upon each of the stumps. After the hedge is cut, strike the axe so as to split the stump in quarters. This will facilitate the entrance of the salt. Every two or three weeks all sprouts should be trimmed off."

Quantity of Hen Manure.—W. P., Kingston, N. J., writes: "I have spread fifteen bushels of hen manure on a piece of ground one hundred by ten feet, where I intend to plant onions. Will this be too much?"

REPLY BY JOSEPH:—This is a tremendous dose, approaching the rate of perhaps sixteen tons per acre. If the stuff consists mostly of the clear droppings, and is in a dry and well preserved condition, such an application may mean six hundred pounds or more each of phosphoric acid and nitrogen, and three hundred pounds of potash per acre. Be sure to mix this manure very thoroughly with the soil—best by means of the disk pulverizer, followed by the Acme harrow.

Remedy for Cutworms.—W. S. C., Nebraska, asks for a remedy for the cutworms that infest his land. He finds poisoned baits objectionable. What I could advise to do in this case is to plant the land with beans as early in the season as safe, and after the plants have come up, have the whole ground hunted over for the worms every morning. They will easily be found near the plants freshly cut off. Hunt up the worms in this manner every morning this way for a week or so, and destroy them. It will probably be safe enough then to plant the intended crop. If this process is considered too laborious, put the crop on soil not infested, and starve the worms out on the infested fields by growing two or three successive crops of buckwheat, and nothing else, on them, for one season.

Applying Manure.—Mrs. H., Idaho, writes: "Our great experimenters advise to cart the manure out upon the land green. I do not understand this. I compost mine and plow it in eight or ten inches deep; and so my lands are clean and yield forty bushels of wheat. My neighbors plow it in fresh, five or six inches deep, and they have plenty of weeds and raise twenty bushels of wheat per acre."

REPLY BY JOSEPH:—It's a simple thing. Merely to keep up soil fertility and prevent loss of fertilizing materials, put the manure back to the fields as fast as made. If we want immediate results after application and prevent weed seedling, compost it, although some fertility will thereby be lost. But in any case, I would prefer to have the manure mixed with the top soil, rather than to plow it in deep.

Celery in California.—E. R. J., Humboldt county, Cal., writes: "Please give some instructions how to raise and blanch celery nicely."

REPLY BY JOSEPH:—I am not acquainted with the climatic conditions in California to know at what season of the year celery should be sown and set in open ground. Perhaps some of the readers in that state will give this information. I would always advise people who have no experience whatever in the culture of vegetables, to be guided, in the beginning at least, by the advice of their neighbors who have some experience. Make your first trial in celery growing for home use with the White Plume. Raise plants in seed bed, and transplant in rows three feet apart, having plants six inches apart in the rows.

Vine Disease.—A. J. W., Fall River, Mass., asks: "Why is it that my garden will not produce cucumbers, melons, pumpkins, etc.? The plants come up and live for awhile, but just before bearing, turn yellow and die. The ground is in good order. What can I do in this case?"

REPLY BY JOSEPH:—The trouble, probably, is melon leaf blight, and I hardly know what treatment to prescribe. The disease is of a somewhat mysterious nature. Your ground is probably full of the blight spores, and it may be best to give up vine growing for a few years until the infection has died out. Possibly the application of sulphate of iron (copperas) to the soil, or spraying the vines early and often with copper sulphate solutions may help you; but this as yet is all conjecture.

Root Crops on Muck.—G. N. C., Oberlin, Ohio, writes: "Are mangels, rutabagas and carrots very likely to succeed on shallow muck? How would such soil be suited to beans? What is the best way of making a storage-room for roots in basement of barn?"

REPLY BY JOSEPH:—If the muck soil has good subsoil drainage, and is enriched with the needed amount of fertilizers, especially of the minerals, by application of compost or wood ashes, or bonedust and potash salts, mangels and other root crops would most likely do very well. The soil being shallow, it would be advisable to select the shallow-rooted varieties of mangels and carrots. Ordinary beans would also succeed under the conditions named. The basement of a barn can easily be arranged for a storage-room for root crops. All you have to do is to make it frost proof, by double walls and ceiling, etc.

Mangel-Wurtzel Culture.—R. A. B., West Rushville, Ohio, writes: "Please give method of growing, storing and feeding mangels, naming best variety for clay soil."

REPLY BY JOSEPH:—Manure the ground well with yard manure that is free from weed seeds, plow deep and make a smooth, mellow seed bed. Plant seed in drills three feet apart, firming well. Give clean and thorough cultivation. Thin plants to one foot apart. Pull before freezing, store in underground barn or root cellar, or in pits outdoors, like potatoes. I prefer the Yellow Globe varieties to all others, although the sugar beets have a greater nutritive value, and are preferred by many growers on that account. Feed regularly and liberally to cattle, sheep and hogs. Mangels are also good for poultry, either boiled and mixed with bran and meal, or chopped up raw for variety.

Soapsuds.—J. B. I., Montgomery, N. Y., writes: "I have a chance to get the soapsuds from an adjoining woolen-mill upon my land. The soap used is made of caustic potash and cotton-seed oil. They use about 100 pounds a day, in about 1,200 gallons of water, to wash 2,000 pounds of unwashed domestic wool. What would it be worth as a fertilizer, and what would be the best and cheapest way of applying it?"

REPLY BY JOSEPH:—The suds are, of course, rich in potash and nitrogen, and I think could be in some way utilized to give excellent results for vegetables and fruits. Still, I hardly know what to say in regard to mode of application. Perhaps some of the readers of FARM AND FIRESIDE will be able to offer advice. I should try to convey it to the fields and distribute it evenly by means of a system of tile placed just below the reach of the plow.

Fertilizer for Onions.—J. E., Tennessee, asks: "How much of a fertilizer, branded as follows: moisture, 12.36 per cent.; phosphoric acid, soluble, 7.74 per cent.; reverted, 2.22 per cent.; insoluble, 1.78 per cent.; nitrogen, 2.74 per cent.; equal to ammonia, 3.33 per cent.; potash from muriate, 3.39 per cent, should I use for onions on land that will produce a fair crop without fertilizers?"

REPLY BY JOSEPH:—This fertilizer is perhaps better suited for grain farms than vegetable gardens or onion patches. It has a great deal of phosphoric acid and hardly enough nitrogen and potash, and the latter not in the best form. Still, as you have it on hand and the land is in good condition anyway, put on a ton, and it will probably give good results. Of course, I expect there is plenty of humus in the soil. The fertilizer in question should be bought at about \$32 per ton.

Rye as Green Manure.—M. H., Franklin county, Pa., asks: "When is the best time to plow under a sod of rye? Would an application of lime, say fifty bushels per acre, be of benefit?"

REPLY BY JOSEPH:—All green crops for manure should be plowed under when the soil has become warm—any time in spring or early summer. Warmth is needed for the decay of the green stuff, and so is air and moisture. Plow in shallow. The application of lime—ten, fifteen, twenty or more bushels per acre—will promote decay and aid in fitting the rye for food for the succeeding crop. The only thing, however, that is really added to the soil by rye is a little humus (carbon). Clover or peas would also add nitrogen. The minerals, potash and phosphoric acid must be added in other forms from the outside, as in ashes, phosphates, potash salts, etc.

Composting Manure.—F. M. S., Belleville, Ill., writes: "What do you think about sprinkling lime through horse manure and straw as it is thrown out of the stable, to help decompose the manure? Do you think that the lime would destroy any of the qualities that are in the manure?"

REPLY:—If you intend to leave the manure in large piles outside the stable windows, it won't do at all to mix lime or ashes with it. They will help decompose it but will also set free the ammonia and it will be lost by evaporation. If you make a regular compost heap and cover it with earth to absorb and hold the ammonia, you can use lime and ashes to advantage. Sprinkle land plaster or gypsum freely around your stable and over the manure, as it will absorb and save the ammonia that escapes so easily from heating stable manure.

Overproduction of Prunes.—L. W., Halsey, Oregon, writes: "There is a question exciting the land owners on the Pacific coast very much—prune culture. Thousands of acres are planted to prunes yearly. Is there not danger that when these large prune orchards come to bearing that the supply will exceed the demand? Or is there a deficiency of soil and climate adapted to the growing of prunes in the area of the United States?"

REPLY:—No prophecy regarding the subject is of any value. There is, of course, a possibility of temporary overproduction of prunes. On the other hand, the market for the fine fruits of the Pacific coast is constantly and rapidly enlarging. Prune culture has one special advantage—the product does not have to be used as fast as the fruit ripens. It can be prepared for market and kept a long time. As your product increases, it will be introduced into new markets and the demand for it carefully cultivated.

Esparsette Clover.—E. M. B., Williamsport, Pa. You can obtain the seed from the seedsmen who advertise in our columns. It is the same as Sainfoin, and you may see it advertised under that name in seed catalogues. It is a leguminous plant that is well known and much cultivated in some parts of Europe, but it does not seem to have succeeded very well in this country. Prof. Beal says: "In France this plant is much grown to improve poor, hungry land, and will last four to seven years in succession. It is employed for soiling, for pasture, or made into hay after the manner of red clover. The seed is sold in two forms, that covered with the short, wrinkled pod, and that which has been separated from the pod. In England it is considered a very suitable plant for calcareous soils." It would be well for you to experiment with it in a small way at first, and find out whether or not it is adapted to your soil and climate. We think it requires about two thirds of a bushel of seed for an acre.

Flax.—R. E. W., Westola, Kan. Any well-drained, deeply-plowed and thoroughly-pulverized soil that is adapted to oats will grow a good crop of flax. In your state it is successfully grown as the first crop on broken sod. The ground should be made as fine, mellow and smooth as possible. The seed is sown broadcast and brushed or harrowed in lightly. Flax should be sown about corn-planting time or a little earlier. If the crop is intended for seed alone, two or three pecks per acre are sufficient; if intended for fibre, two to three bushels are required. When sown thickly, a finer fibre in larger quantity is produced. It can be harvested with a twine binder adjusted to cut quite close to the ground. It is threshed with an ordinary grain thrasher. When raised for the fibre, the top part of each sheaf is cut off in a cutting-box, and the bundle of flax straw left straight and convenient for further handling. The agricultural experiment station at St. Anthony Park, Minn., has recently

published a bulletin that is a complete treatise on flax culture. It is mailed free to the residents of Minnesota who make application. We presume that you could obtain one by accompanying your application with stamp.

Rye for Green Manuring.—C. G. S., Grauville, Ill., writes: "Is there any such thing as spring rye? If so, where could it be obtained? How would it do, where a person has a piece of corn ground that is in good shape and wants to raise corn on the same ground for a number of years, to sow rye just before plowing the corn the last time, pasture it in the fall and winter, then let grow until it got a good start in the spring and plow it under and plant corn?"

REPLY:—You can get spring rye of seedmen who advertise in our columns. Your plan of sowing rye to turn under is a good one, but it is not best to raise corn or any other crop on the same ground for many years in succession. A rotation of crops is much better. Pasture the rye lightly, and not at all when the ground will be injured by the tramping of stock. If you pasture it much you cannot expect to have a very heavy growth to turn under.

Kainit and Landplaster.—B. H., Fulton county, Ark., writes: "When is the best time to sow kainit, when sowing seed or after the plants are up, in the hill with the seed or around? Is landplaster or gypsum a good fertilizer for onions, beets, lettuce and other vegetables?"

REPLY BY JOSEPH:—Kainit for ordinary crops should always be applied in the fall, before the crop is planted. This is a case where we must feed the soil rather than the plant, for kainit, like muriate of potash, contains chloride; and this may possibly do injury to the plants if applied in liberal doses. You can try light applications without fear at any time. It is also now recommended as a remedy for maggots, and may be worth the trial. Gypsum or landplaster sometimes gives good results on potatoes, corn, peas, beans, etc., but usually we have little use for it in the garden. On soils deficient in phosphoric acid, or needing the solvent action of sulphuric acid, acid phosphate may prove quite beneficial. But, as I say, it depends on the soil itself.

Silo.—J. A. N., Kelly Cross Roads, Iowa, writes: "I contemplate building a silo, and not being fully acquainted with the mode of construction, I thought I would give you my idea, and ask you for further information. I have a bank barn. I propose to build in the north-west corner of the barn, on two sides. I have a stone wall seven feet high; this I shall cement. The balance of the silo I intend to board up with two thicknesses of inch boards, and tar-paper between. So far as this plan goes, will it give satisfaction? Would you advise a plank floor, or simply cement on the ground floor? When it is filled, must the feed be taken out of the top, or can I have a door into the silo on the ground floor? Are corn ears cut with the fodder for ensilage?"

REPLY:—You can construct a silo in the corner of your barn. You will not need a plank floor in the bottom. For taking out the ensilage, make doors from bottom to top, at most convenient side. The ears are cut up with the fodder. Send twenty-five cents to this office for Prof. Cook's "Silo and Silage." It will give you full instructions about building and filling silos.

Orchard Grass.—A. C. W., Hugo, Ill., writes: "Farmers in Illinois and adjoining states are waking up to the great value of orchard grass. There is an orchard-grass craze coming in the West. It may, however, be ten or twenty years in the future; but it is sure to come. I have had it in pasture lands for fifteen years, but I want an answer in your query department to these questions: How do you cut, handle and thresh it for seed? Is extra machinery absolutely necessary? Will not some farmer having experience tell us all about it?"

REPLY:—Will some reader kindly tell how it is managed when grown in large quantities? The best way that we ever heard of was to cut, bind and shock it, just like wheat or oats. Let it stand in the shock until cured, when the seed separates very readily from the straw. Put a slat platform on top of your wagon-bed. Drive alongside of the shock, place a sheaf on the slats and strike the top end a few blows with a stick, which will knock out all the seed. It is not necessary to unbind the sheaves. Or, you can take a sheaf in the hands, and strike the top end on a barrel a few times. Or, they can be hauled to the barn and the seed failed out, as in the old way for wheat. Cut it before it gets dead ripe, or much of the seed will fall out when harvesting it.

Manure and Ashes.—G. G. B., Wisconsin, writes: "I have hauled stable manure to a piece of sandy soil this winter, leaving it in small piles, so it can be easily scattered in the spring. Would it be advisable to put on good, hardwood ashes and landplaster after the manure is all scattered? If so, how much of each kind?"

REPLY BY JOSEPH:—In the first place, the stable manure, if hauled out in winter, should have been scattered evenly over the fields at once. The snows and rains of winter leach out a large part of the soluble plant foods, and the consequence will be that you have this fertility in spots, where the manure piles were, and not evenly distributed over the whole field. I think a great deal of landplaster when scattered in stables and over fermenting manure heaps. Thus employed, it absorbs the fleeing ammonia and purifies the stables. But I cannot see what good plaster would do if used as the querist proposes. The manure and ashes will furnish the needed plant foods. Have the manure plowed under and then apply the ashes as a top dressing, at the rate of from ten to fifty bushels per acre—the more the better—and work them into the soil by means of the harrow.

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NYACK, N. Y., Jan. 16, 1891.
The Atlas has just arrived. We are much pleased with it, and I am happy to say it has procured you two new subscribers.
MRS. D. S. BURNICK.
ROSS, PA., Jan. 19, 1891.
I have received the Peerless Atlas of the World. It is a valuable and instructive book, informing one so plainly of the positions and products of land and sea, and population of all nations, their history and habits. The book, in substance, is invaluable, and is worthy a place in any library.
ANNA M. BROOKS.

Queries.

VETERINARY.

Conducted by Dr. H. J. Detmers,
Veterinarian of the Ohio Agricultural Experiment
Station, and Professor of Veterinary Surgery
in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Garget.—M. L. F., Lovers. — The best advice I can give you, is to milk often and in a thorough manner, until all "lumps" have been removed and no more of them make their appearance.

Splint.—I. H., Westfield, Ill. Splint inquiries have recently been answered so often that to save space and to avoid tedious repetitions, I have to refer you to recent numbers of this paper.

Dehorning Cattle.—W. R., Verndale, Minn. I regard dehorning as a cruel and useless operation, and therefore shall not do anything to promote its execution. If one prefers cattle without horns, there are plenty of muleys to breed from.

Broken Hip.—A. M. R., Hannibal, N. Y. Your colt, it seems, has a broken hip (fracture of the external angle of the ilium, or hip-bone). The lameness will gradually disappear, and the animal may make a good working horse. Nothing can be done in regard to the fracture. The strong muscles attached to the external angle of the ilium have pulled the fractured piece downward.

Weakness.—J. P., Peoa, Utah. The weakness and lameness you complain of may be due to rhabdomyositis. If such is the case there is something wrong in the diet of the animal. Sound and suitable food, proper keeping and voluntary exercise will effect an improvement, and may be a cure, provided the morbid changes produced are not yet such as to make a restoration impossible.

Destroyed the Roots of the Hair.—D. W. D., Champion, Pa., writes: "I have a colt that had a fistula, and I blistered it. It took the hair off, and it won't grow out again. What will be good to make it grow?"

ANSWER:—When the roots of the hair have once been destroyed—it is immaterial whether by a blister or by something else—no new hair can grow or be made to grow.

Ringworm.—H. R., Seckman, Mo. Soften the crusts with oil, or with soap and warm water; then apply, once a day, either a five-per-cent solution of carbolic acid, or paint the crusts with tincture of iodine. Subject the stable, troughs, mangers, stanchions, etc., to a thorough cleaning; because the disease is caused by a fungus which, or the spores of which, lurk somewhere in the stable.

Wool-eating Lambs.—J. S. W., Burnside, Pa. There must be something wrong in regard to the food and the keeping of the lambs. Their food, especially, without question, lacks some essential constituents. If your lambs again commence to eat wool, change their diet and take them at once to another place and the thing will stop. Of course, such wool balls are indigestible, and close the dofunny of the intestines.

Veterinary Books Wanted.—J. E. Z., Brunswick, Mo. If you desire books, please write to a bookseller in St. Louis, Kansas City, or some other place, ask him to send you a catalogue, and then take your choice; pick out what you want and order it. I cannot and will not recommend books, because what I may value, I know you would discard, and the kind of books you want, I am not acquainted with, because I have neither time nor inclination to read them.

Cœnurus Cerebralis.—A. J. T., Winchester, Va. The symptoms you describe are such as are caused by the presence of a cyst worm, cœnurus cerebralis—the larva of a tapeworm of a dog—in the brains of sheep.—What you call grubs in the uterus are the cotchydoors, which you find in the uterus of every pregnant sheep. Don't tell it to any practical sheep raiser that you found such "grubs" fastened to the inner surface of the womb.

So-called Sweeny.—C. B., Trenton, Mich. You probably used a collar that did not fit the animal, or used tings of unequal length, and thus compelled the young animal to pull the whole load with one shoulder. Give the colt nutritious food, exempt the same from work of any kind for six or eight months, and provide for voluntary exercise, and next year, about this time, or perhaps earlier, everything will be all right. Salves and liniments can do no good, and not only are superfluous, but also do damage.

Worms.—C. P. B., Moberly, Mo. Lampass is nonsense. Your horse probably has worms. Feed plenty of good oats, turnips or carrots, and if you have it, and can teach the animal to take it, buttermilk. Besides that, see to it that your animal is well groomed and kept clean. Do not feed any spoiled hay, and give no impure or stagnant water. If the above directions are followed, probably no medicines will be needed, and if they are not followed, no medicine will do any good.

Ringbone.—L. S. S., Lemars, Wash., writes: "I have a fine horse five years old that is lame in his left front foot. Has a lump just above the hoof where the hair begins, about three inches in length and half as large as a hen's egg. The hoof is pointed. He has been lame about six months."

ANSWER:—Your horse seems to have ringbone. The treatment has to be the same as that of spavin. Please consult, for further information, an answer given to a similar inquiry in the issue of this paper of December 15th last.

Liver Flukes.—J. G., Seal Rock, Oregon. What you call leeches seem to be fluke-worms. There is no remedy. You can, however, prevent the disease, if you keep your calves away from wet and swampy ground, and prevent them from drinking stagnant water from pools and ditches, because there it is where they pick up the worm brood. At present the eggs of the worms are passing off with the excrements. The invasions usually take place during the summer months, and only high and dry ground, that is entirely free from stagnant water, is safe. The disease is always worse after a wet summer.

Cough.—L. E., Thurman, Ohio, writes: "I would like a remedy for a cough, which is affecting cattle to a great extent in this vicinity. They have a severe cough, seem very thirsty and soon die."

ANSWER:—I have stated time and again that coughing is a common symptom attending nearly all respiratory disorders. It is therefore utterly impossible to base a diagnosis upon that one symptom. As your cattle are

severely affected and dying, I think it would pay you to have them thoroughly examined by a competent veterinarian.

Sore Eyes.—W. W. B., Paloma, Ill. It is not always so easy to decide whether an eye disease is periodical ophthalmia or not, even if an examination can be made. You cannot, therefore, expect me to decide the question, having nothing before me but a meagre description that does not mention any of the essential points, nor even indicate that the interior of the eye is affected, which is always the case in periodical ophthalmia. Besides that, you do not say anything in regard to the probable cause or causes. Ask your doctors to give their reasons for their diagnosis, then report again and we may possibly arrive at a conclusion.

Probably a Fistula.—E. H. S., Adams, Oregon, writes: "I have a horse five years old this coming spring. About three years ago I noticed one day that he appeared to be in much misery. A few days after there was a place under the jaw at the lower part that was running. It has never healed up."

ANSWER:—I have no idea of what may have caused it, but what you have to do first is to make a careful examination by probing, etc., so as to ascertain the nature of the sore, its extent, etc., and to learn what parts have been injured. As to the treatment, I have to refer you to recent answers given concerning the treatment of fistules.

Sore Teat.—P. S., — N. H., writes: "I have a four-year-old cow that calved in January. She was fat when she calved, but had no grain. Now I feed three quarts of bran, and did feed one quart gluten meal. One teat has a small bunch in the end that has been there about two weeks. It is very hard to start the milk, and is hard to milk after it does start. Is there danger of her losing that teat?"

ANSWER:—You may try to introduce a bougie made of an end of cat-gut coated with unguentum plumbi. Of course, at each milking the bougie must be removed, and after each milking a new one must be introduced.

Respiratory Disorder.—C. S., Marietta, Ohio. If your mare has heaves, you must feed no hay at all, at least no timothy and clover hay, but may give corn fodder or good, clean oat straw, and make up with grain—oats, corn, etc. In short, see to it that she never has her stomach too full of bulky food; also, that she is not costive. If she is costive, give a good bran mash. If carrots and turnips are available, now and then a meal of them will do good. See that the stable is well ventilated and that the mare has the coolest place, or a place where she can get an abundance of fresh air. As soon as the new grass comes, turn her out to pasture, at least in day time.

Oil Cake.—L., Colorado Springs, Colo., writes: "Please state the right quantity of oil-cake meal to feed to a seven-year-old colt, with a two quart feed of oats and corn chops, principally oats. Colt is out on grass and has free range, except when stormy. I want to force him as much as possible. I find a great difference of opinion in regard to oil-cake meal."

ANSWER:—You will but accomplish your purpose—that is, develop a strong and vigorous animal—if you feed no oil cake at all, but give an abundance of muscle-producing food; good oats.

Partial Displacement of the Patella.—Your filly seems to suffer from an incomplete fixation of the patella or knee-pan, caused by too lax a condition of the ligaments and produced by the awkwardness of the animal when getting up and down. You may yet effect a cure if you tie the animal in such a way as to keep it standing, and then apply at the sides and below the joint a good blister; for instance, oil of cantharides, the composition of which has been repeatedly given in these columns. The treatment has to be continued until the too lax condition of the ligaments has been removed. The injury itself is not hereditary, but a lax or flaccid condition of tissues is apt to be transmitted to the offspring.

Sore Shoulders.—J. R. M., Artic, Ind. The shoulders of working horses are apt to become sore: First, if the harness, but particularly the collar, does not fit the animal, and second, if either the animal or the harness, but particularly the collar, are not well cleaned every time when covered with sweat and dirt. As the sores in your case are chronic, that is, of long standing, it may be that the skin and subcutaneous tissue have undergone considerable degeneration. In that case you will do best to entrust the treatment to a competent veterinarian. If there is no such degeneration, you will effect a healing by making frequent applications (two or three times a day) of a mixture of lime-water and olive oil, equal parts.

Diarrhea of Calves.—W. M. H., Delta, Colo., writes: "I have a small herd of Jerseys and make a specialty of gilt-edge butter, but most of my calves died before they were a year old. They were smart and bright at first, and sometimes until they were several months old, but they got scours or diarrhea. Before they died they passed blood, and soon got so weak they could not stand up."

ANSWER:—There must be something radically wrong in the diet and the keeping of your calves. Feed them sound and healthy food, such as agrees with calves, and while shut up keep them in clean and well-ventilated quarters. Further, do not wean too early, and allow the calves all the pasture, fresh air and out-door exercise they can get. Last, but not least, do not feed anything that is sour or spoilt.

Probably a Malformation.—J. K., Glen Ullin, N. Dak., writes: "I have a calf with a very strange swelling on the right side of his head. It has been there ever since he was calved, and it has grown with the animal until it is as big as a man's two fists. We opened it some time ago but it did not help it. The swelling is just above the eye and around the ear."

ANSWER:—What you call a swelling seems to be a deformity, which, possibly, may contain an erratic tooth. If so, a surgical operation will be necessary to remove it. But as the exact nature of what you call "a swelling" does not appear from your description, the best advice I can give you is to have it examined by somebody who is well acquainted with the anatomy of those parts, if no veterinarian is available. Otherwise, fatten your calf and convert it into veal.

Edematous Swellings.—J. L. M., North Judson, Ind., writes: "I have a mare ten months gone with foal. One morning I noticed she seemed stiff behind, but could discover nothing. In the afternoon of the same day I noticed a small swelling near the flanks, below the point of the ribs on the left side. The swelling has gradually enlarged, working its way forward and to the other side and now covers the entire belly and reaches to the back part of the front legs. The swelling seems to be from one to four inches thick, and when pressed with the finger leaves a dent for a few moments. There is also a swelling the size of a large saucer on the outside of the right hind leg. The legs are cold from the

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knees down. The pulse ranges from 45 to 62. She eats heartily, has no lameness, does not seem to be sick, and her eyes look as well as ever. She does not lie down. The swelling seems tender to the touch, and she flinches when it is pressed."

ANSWER:—Your mare does not require any medicine. Give her sufficient voluntary exercise, and see that she is well groomed. Give her nutritious but not bulky food, and no more water to drink than she needs. Such edematous swellings, a short time before parturition, are quite common, and don't amount to much if the above rules are observed. If she should be costive give, now and then, a bran mash.

"Slipped" Her Shoulder.—A. R., Gonzales, Tex., writes: "What is good for a mare that has 'slipped' her shoulder? Her leg is useless, and in moving she drags the limb."

ANSWER:—I do not know what you mean by "slipped her shoulder," whether you mean a dislocation of the shoulder joint, a fracture of the scapula (shoulder bone) or of the humerus, or paralysis of the median nerve. If it is the latter, time, possibly, may effect an improvement. If it is the former, the animal is worthless, unless a reparation can be effected in time; and if the shoulder bone or the humerus is broken, the animal may live, but will be a worthless cripple for life.

Paralysis.—E. J. B., Tontion, Ill., writes: "I lost a valuable colt. She was stabled at night, but ran out all day. She was fed on oats and oat straw, and was in good order, but not fat. I put her in stable at night, well, and the next morning found her down. She never got up. She suffered terribly until she died. My oat straw last summer was badly rusted; could that have been the cause of her death?"

ANSWER:—It is possible that the fungi of the oat straw caused the paralysis and the death of the animal. The best way to ascertain the cause of death would have been to make a careful post-mortem examination, extending not only to the organs situated in the large cavities of the body, but also to the spinal chord.

A Callous Swelling.—C. R., Peach Grove, Ky., writes: "I have a fine mare that bruised her foot in some way while in the pasture one day when the ground was frozen. It has been two months since it was hurt. She has gotten entirely over the lameness, but there is a calloused lump, two or more inches long, formed around the inside of her foot, right at the upper part of her hoof. The lump is on the hoof, and not of the flesh."

ANSWER:—I am afraid not much can be done in regard to your case. Constant and uniform pressure, applied by judicious bandaging, may have the effect of reducing the enlargement in the future. That at present existing, being in the hoof, must grow down, and cannot otherwise be removed. Applications of ointments, liniments, etc., will make it worse. When it has grown down more than half way, some of the enlargement may be removed with a file or rasp by the blacksmith.

Partial Dislocation of the Patella.—W. C. K., Dolores, Colo., writes: "When I take my horse out of the stable in the mornings he will drag one hind foot behind, and then, all at once, he will fling it forwards with a jerk or a snap in his stifle joint. He will do that for a little while and then he seems to be all right." S. V., Lunke Chute, O., also writes: "My cow is stiff in left hind leg. Her leg catches and jerks up when she has been laying down or standing still, and she cannot walk on it. But after working her leg she can walk on it. We cannot see that her leg has ever been swollen."

ANSWER:—Both horse and cow, it seems, suffer from a partial dislocation (luxation) of the patella or knee pan, which slips out of its place when the animal is down and tries to get up, or when the same makes a misstep. Repeated applications of a good counterirritant at the sides and below the joint (not above the same) may yet effect a cure. As a counterirritant, oil of cantharides, prepared of one part of cantharides and four parts of olive oil, heated for an hour in a water bath (it is best prepared by a druggist), will answer. It may be rubbed in once every four days. The horse should be kept standing, that is, be tied in such a way that he cannot get down, until a cure has been effected.

Doctored to Death.—R. F. A., Delta, Colo., writes: "We have lost several horses since 1879. They don't seem to digest their food properly. I can't say we saved any in that time that took sick. We use a syringe and give them raw linseed oil all in vain. Seven died last winter, two since. I opened four. They seem to be



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Mention this paper when you write.

clogged at the entrance of the small gut. I have some notion trying quacksilver; it seems to be death anyway."

ANSWER:—Linseed oil is no medicine for a horse. In the first place, being fatty, it is very objectionable to horses; secondly, its effect is only a mechanical one; and thirdly, it very often passes down the trachea into the lungs, and then the horse is a "goner," and will die of pneumonia. Even if every bit of it goes into the stomach it will thoroughly spoil the appetite of the animal for several days. Your remarks about the horse's stomach and your drawing plainly show that you are not familiar with the anatomy of those parts. If your horses have colic, and you cannot get a competent veterinarian and don't know what to do, my advice would be to do nothing whatever, except to make the animal as comfortable as you can, and you will meet with much better results. Most cases of colic get well without any treatment, and far more colic patients are killed by medication than by the disease itself.

Our Household.

MUTUAL DUTIES.

Every smallest hand can lend some kind or helpful touch.
Lift the weight a little and the many make the much.
Shared feasts are savory feasts, shared joys are best,
And the sharers and the shared-with, both alike, are blest.

—Susan Coolidge.

HOME TOPICS.



ANNELOON BEEF.—

This dish may be served hot with tomato sauce or sliced cold. The latter is nice for sandwiches, picnic lunches, etc.

Take two pounds of lean beef, two teaspoonfuls of salt, one half teaspoonful of pepper, two teaspoonfuls of onion juice, two sprays of parsley, one egg and two tablespoonfuls of melted butter. Have your butcher chop the meat as for beef tea, with no fat or gristle in it, or if you have an Enterprise Meat Chopper you can prepare it yourself. Put the beef in a dish and add the finely-chopped parsley, the salt and pepper, the onion juice, the melted butter and the well-beaten egg. Mix all well. Form it into a loaf on a large piece of buttered manila paper; fold the paper over it tightly and tie it in place. Put the loaf in a dripping-

pan and bake it about an hour, basting it every five minutes with a mixture made by melting a tablespoonful of butter in a cup of boiling water.

TOMATO SAUCE.—

One pint of tomatoes, one very small onion, four cloves, one tablespoonful of butter, one tablespoonful of flour, one scant teaspoonful of salt and one quarter teaspoonful of pepper. Put the tomato in a sauce-pau, stick the cloves into the onion and put it into the tomato. Let it cook fifteen minutes. Brown the butter in a frying-pan, add the flour and cook these together until well mixed and smooth. When the tomato is done, stir in the butter and flour, pepper and salt; strain all through a sieve into a hot bowl. Remove the paper from the meat, put the meat on a platter, pour the gravy that is in the paper into the tomato sauce and then pour the sauce on the platter around the meat and serve immediately. If curry powder is liked a half teaspoonful may

the very sound of our children's voices, which ought to be sweet music to us, is a positive pain. When the tired nerves cannot bear the strain, and sharp and angry words come to the lips, for which we repent in tears and pain. I know just how it is, for I used to work that way myself sometimes, and I want to say to every young mother, don't do it. Make your work just as easy as you can in every way. You have no right to get so tired that you cannot be a tender, sympathetic mother. It robs both you and your children of what you cannot afford to lose. Don't try to do as much work as some other woman. Make no one your standard, but do just as much as you can do without robbing your children of their right. Be more economical of your own health and strength, for nothing is more absolutely necessary to the comfort and happiness of the home, and the babies need mother now more than they will ever need anything else. Get all the help possible when you begin house cleaning; and above all else, begin with the determination to not overwork.

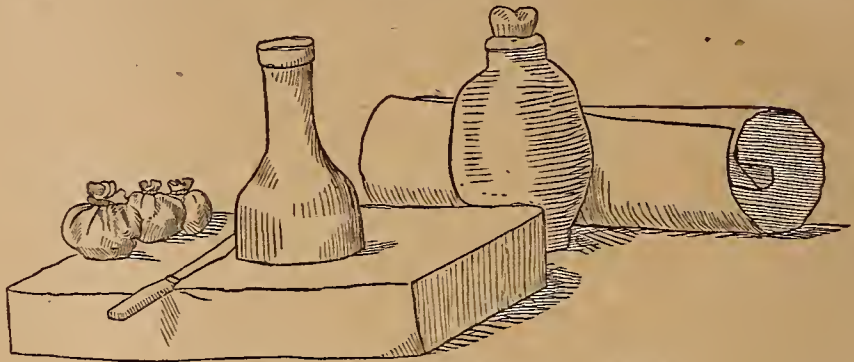
One of the hardest parts of house cleaning is taking up and putting down carpet. It is a man's work, and yet, nine times in ten, a woman must do it in the country, because work out of doors is crowding at the same time and cannot be put off. I have not had a carpet in my house in over four years. My floors are either stained or covered with matting, and then a large rug in the center of the rooms with smaller ones in bay-window, and before the fire or wherever needed.

Work on, brothers, be not daunted,
Though the harvest seems so small;
If the farmer had not planted,
None had gathered in the fall.
Brothers, sisters, work together,
Plant the seed and watch with care;
Though to-day be gloomy weather,
By and by it will be fair.

—A. A. K.

MORE DRAWING FOR THE BOYS.

If a boy opens his eyes, he will find something to draw wherever he looks.



NO. 1.—ETCHER'S MATERIALS.—PENCIL SKETCH.

The tea-kettle sitting on the kitchen stove and sending up a cloud of steam, will make a pretty picture. If you are willing to draw something dark and prosaic, try an iron pot. A cup and saucer are good to practice on. You must notice that although the top of a pot or bucket or cup is round, it does not seem to be so unless you are looking directly toward the bottom of the vessel. If you hold a cup on a level with your eyes, the top seems a straight line; if you hold the cup below

You will probably have no etcher's tools to draw, but suppose you try to make a picture of the tools with which your mother makes her excellent doughnuts. The rolling-pin, the board on which she rolls the dough and a bowl in which she mixes it. Oh, that would make an appetizing picture! Do not mind about shading it much; just get the outlines, and do not finish the rolling-pin before you begin the other objects. The best plan is to map out the whole picture at once; at least, in-

dicating by a mark or two where each object is to be.

A man who afterwards became a great artist, said that when he first went to Rome to study art (it is not necessary to go to Rome), he determined he would sketch many things. He began by making a picture of two men who had stopped to talk with each other. He made their heads very carefully; but lo, they ceased talking and each walked away; the young artist was left with the two heads only.

He found he must try another plan. He, after that, very quickly sketched the entire figure, or the group of figures; then, if they kept still, he touched up his sketch, making it better all over. You see, his last way of working is the best.

Of course, your still-life study will remain quiet as long as you please; but you may not have a chance to work very long. Get the whole picture as quickly as possible, and then finish it as patiently and finely as you please. The artist I referred to was Corot, and he became so skillful in making rapid sketches that he could get very ex-

THE YOUNGEST CAT.

BY J. E. PANTON.

A small, bright face, two round, green eyes,
A fluffy head as soft as silk,
Two ears pricked up in swift surprise,
Two whiskered lips to drink the milk.
So sleek, so quick, so fair, so fat,
There's nothing like the youngest cat.

She has no reverence for the rest;
Plays unconcerned with Sambo's tail;
Pulls gently at Lord Ernest's crest—
A feat that turns her mother pale.
He growls and bites. What of that?
She's safe up high, our youngest cat.

Then creeping around the sofa back,
She pats her mistress with her paw;
Disturbs the monarch, sleek and black,
Whose lightest mewings once were law;
He wakes; he spits. She's reached the mat
And flown out-doors, that youngest cat.

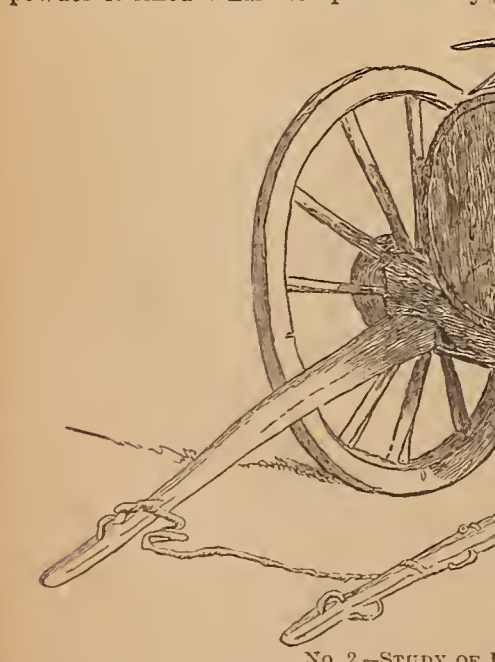


She's here, she's there, she's everywhere;
No spot is sacred from the pet.
Of food she takes the lion's share;
She rushes where the saucer's set;
The mouse she claims; she beards the rat
Within his hole, the youngest cat.

She climbs the desk, she spills the ink,
Then chases swift the lagging pen.
We put her down, but ere we think,
She's up and at the game again.
An author's words come scarcely pat
When walked o'er by the youngest cat.

A tease, a joy, a plague, a dear—
Her names are many as her tricks.
We chase her off, then call her near;
The rest look on as cross as sticks.
No house is dull, be sure of that,
Which always holds a youngest cat.

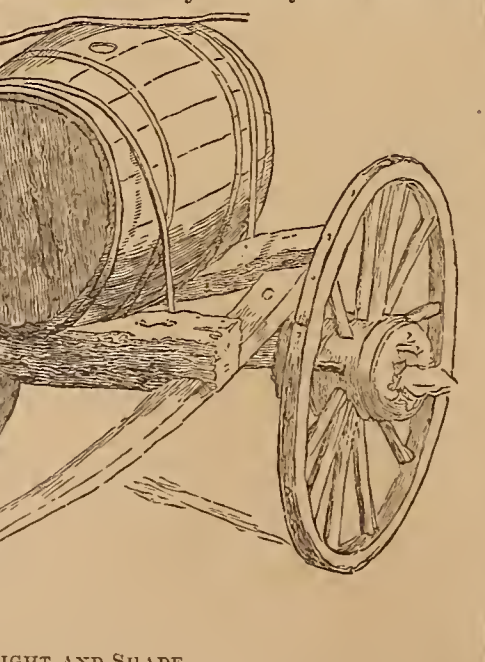
be added to the tomato sauce before it is strained.



NO. 2.—STUDY OF LIGHT AND SHADE.

HOUSE-CLEANING TIME.—By the time this paper reaches the thousands of homes in which it is a regular visitor, the time for spring house cleaning will have arrived, and too often that means days, and weeks, sometimes, of work beyond one's strength. Days when the body is so tired that life seems hardly worth living. When

Matting does not need to be taken up until worn out, except to change a breadth or so, perhaps, when it begins to wear. It is easily swept and the rugs can be taken out and dusted whenever needed. In the summer they can be put away and only the matting used. My stair carpets are taken up in the spring and not laid until fall. Maybe everyone would not



like this way, but I would not go back to floors covered with carpets and all the dust that accumulates in them, and the weary work of taking up and putting down again once and sometimes twice every year. It has robbed house cleaning of half its terrors.

MAIDA McL.

Pneumonia is prevented by Dr. Hoxsle's Certain Croup Cure. Safe and sure. Mailed on receipt of 50 cts. Address Hoxsle, Buffalo, N.Y.

your eyes, the top seems oval. Try these experiments.

Now, I will tell you a new word, which artists use a great deal; that word is *foreshorten*. We say the top of the cup does not appear round when we look at it from one side, because the circle is foreshortened. If you look through your picture books, you will find many instances of this. Perhaps you can find a picture of a horse running toward you. By measuring you will find that the distance from his head to his tail is not so great as his height; yet the picture seems to be all right; the horse is foreshortened. Imagine a man coming toward you with his arm extended, ready to shake hands with you. Now, to make a picture of that man, in the position we mentioned, his arm would have to be foreshortened. Those books which you tried to draw were foreshortened. You begin to see that in pictures things take on a new shape, in order to appear right. If this makes a boy feel bored, he need not bother about it; there will be some boys who care to understand these simple expressions used by artists; this is written for boys who do like it.

In sketch No. 1 you have a picture of materials for etching. An etcher is an artist who draws a picture on a thin piece of metal, which is afterwards covered with acid and finally transferred to paper. You see the roll of paper in the background. Notice how few lines and what a little shading make it so real. There is the jug holding the acid, we suppose, and in the foreground the knife, and, is that a pestle? The three little bags tied up, are very natural; and see, they are likely all the same size, but the one farthest away seems to be smallest. I took that picture and the others from the *Art Amateur*.

pressive pictures of the actors on the stage or the tumblers in a circus. You may be sure he learned to get the principal lines very quickly.

Do you not like the "study of light and shade?" You see that the barrel, the wheels, the wagon are all foreshortened. You might copy this picture. Begin by drawing that part of the cart on which the barrel rests. The shading on the end of the barrel and under the barrel adds much to the expression of the picture. After you have made a copy, go out in the barnyard and see if you can find a plow or old cart, or even a single wheel; should such a thing lean against the fence, it will likely be very picturesque. After you have sketched awhile, you will say "picturesque" so often that perhaps the rest of the family will laugh at you,

KATE KAUFFMAN.

DAHLIAS FROM SEED.

It may not be generally known that the cheapest way to obtain a fine variety of dahlias is from a packet of seeds. In this way many new and superior plants may be had at the price of one of the florist. I had, last year, from a single ten-cent packet of seed, twenty plants, which came into blossom in August. Some of them were remarkably fine in form and color. The seed may be started in the house in March and transplanted to the garden as soon as danger of frost is over; or the seed may be planted in the open ground in May. The plants come into bloom earlier if started in the house under glass, and the roots have a longer time in which to come to maturity. Nothing so much aids in producing fine dahlias as soapsuds, in liberal quantity, from the laundry. The soil should be well drained and kept damp. I have been most successful in growing

them in beds, made rich by a liberal application of manure from the barn-yard, thrown on the bed in the fall and turned under to the depth of a foot in the spring. I know some florists advise using common garden soil; they contend that a rich soil makes the stems frail and liable to break easily. This, however, is overcome by tying the plant to strong stakes. The foliage almost conceals the stakes and a support is really necessary. Judicious pruning is also advisable before the plants commence blooming. Eight-inch tile makes nice flower-pots for dahlias on the lawn. A plentiful supply of water must be given them, as the tile is very porous for flower-pots, unless a coat of paint be given it. In this case I would prefer red paint as it is more attractive by contrast. A mound built of tile, sunk in the soil two thirds its depth, makes a pretty lawn ornament; filled with other than dahlia plants, its beauty is increased.

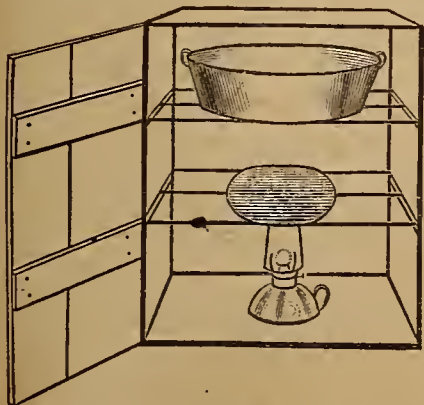
ELZA RENAN.

"Like unto two bits of driftwood tossed on life's raging main,
We meet and greet and sever, perhaps never to meet again."

KITCHEN HELPS.

In many houses the cause of poor bread can be traced to the bread being set to raise where a draught from a door will strike it, or insufficient steady warmth. In a bakery all this is guarded against, the raising-room never being allowed below a certain temperature.

The accompanying cut, which we take



from an exchange, could be made very easily at home, from light timber. It is twenty-three inches square and twenty-eight inches high. The shelves are of wire, and a lamp placed in the lower part makes the warmth. This must not be one that has too large a flame, or it would cook it. On the shelf above the lamp place a piece of heavy sheet-iron. This will insure for your bread an even temperature.

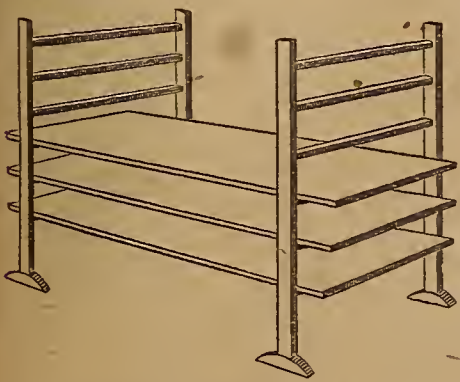
The other cut is a convenience for drying tins.

Did you ever try ticking for dish-towels? Get a light-weight quality and make them a half yard wide, and use the original width for the length of the towel.

For dish-cloths, Turkish toweling is good, or cheese-cloth taken double and basted. In these days of cheap material, it doesn't pay to use a dish-cloth too long. When its days of usefulness are over, burn it.

With greasy dishes, it is best to rub them off with paper and use it to kindle fires with. This saves your dish-cloths and towels, and the dish-water does not clog up the waste-pipes so much. If you just throw the water in the yard, it will not contain sediment to litter up the yard.

In the early days of spring, every bit of litter about the yard should be raked to-



gether and burned; the articles that will not burn should be carted away. Nothing spoils a place like litter.

CHRISTIE IRVING.

RICE PIE.

As apples are so scarce this season, other substitutes must be had for "pie timber." Did you ever try a rice pie? For a common-sized pie, use one half coffee-cupful

of cold, cooked rice, one fourth cupful of sugar, one egg and one half teaspoonful of salt. Mix until the rice is all free from lumps. Then add about a cupful of sweet milk, enough to fill the crust full, at least, and season with nutmeg or lemon essence. No top crust is required.

GRANULATED SUGAR.—In a recent number of the LADIES HOME COMPANION or FARM AND FIRESIDE a lady made the statement that granulated sugar was not fit to use for cake. A friend, who was dairy and food commissioner, told us that it was impossible to adulterate this sugar, unless at so great an expense that it was unprofitable. Other sugars could be, and were heavily adulterated; and the granulated sugar was the cheapest and purest in the market. For several years we have used no other kind, unless for special purposes, as meat packing or fruit cake, where dark was required. Two things are important to remember:

First, granulated sugar is unadulterated and free from lumps, so that the same bulk will weigh lighter and pack closer and be sweeter; hence, it is evident that you should use a less quantity than of the coffee sugar. When a cupful of coffee is required, use a cup filled to within a half inch of the top for granulated sugar; even to three quarters of an inch is plenty in most cases.

Second, granulated sugar is much dryer than others, so it takes longer to dissolve; hence the cake batter needs more beating. In any event, the quality of the cake depends upon the thorough beating of the batter. If you will observe these two important points, use less sugar and beat it longer, I think you will never have to say again that granulated sugar is not fit for cake.

LIVER.—Though often despised, liver makes a very palatable dish when properly cooked. Slice thin, lay in a basin and pour on boiling water enough to cover the meat; this will remove that strong taste. Lift the slices from the water, drain, roll in flour and fry in a spider that is hot at first, and then remove to the back part of the stove, where it will cook slowly for half an hour. Thorough cooking is very necessary if you wish a good dish of liver.

Another nice way to prepare liver is to boil it, after it has been well soaked in cold water. After it is done, chop fine and season with salt, pepper and butter, and add a little water. Set back on the stove until it comes to a boil; it is then ready for use.

Sometimes bits of sparerib, the heart or tongue, if in too small quantities to make a separate dish, may be chopped with the liver. It makes a nice dish for a variety.

GYPSY.

HINTS FOR WINTER.

If pie-crust is left over, more than there is filling for, never mind, for it will keep a week in a cool place (I cannot vouch for the truth of it in summer, but it would keep awhile on ice), and it has proved so convenient many times, that we often aim to mix enough, on purpose to keep over, for two pies. We set the dough away in an earthen bowl and cover with a small plate. It takes but little time in an emergency to roll out and fill with prepared cream, mince or custard. Dried berries will soak out in a short time in warm water on the back of the range, and are easily prepared.

I heard of a lady who, when making bread, made a tin of biscuits, which, when they were sufficiently light to bake, she put away in a summer pantry to freeze. Her family was small, and she having unexpected company frequently, found it very handy at such times to thaw out and bake them for tea. No harm done if no company appeared every time (but it more often happened that they did than otherwise); the family had a change and relish, and it was no waste. Here is a good recipe for

WHITE SOUP.—Boil four potatoes and mash them fine with butter; add one well-beaten egg and season; boil one pint of milk in the water in which the potatoes were boiled, pour over the mixture, stir well, strain and serve very hot. Sometimes we add a few small onions to give

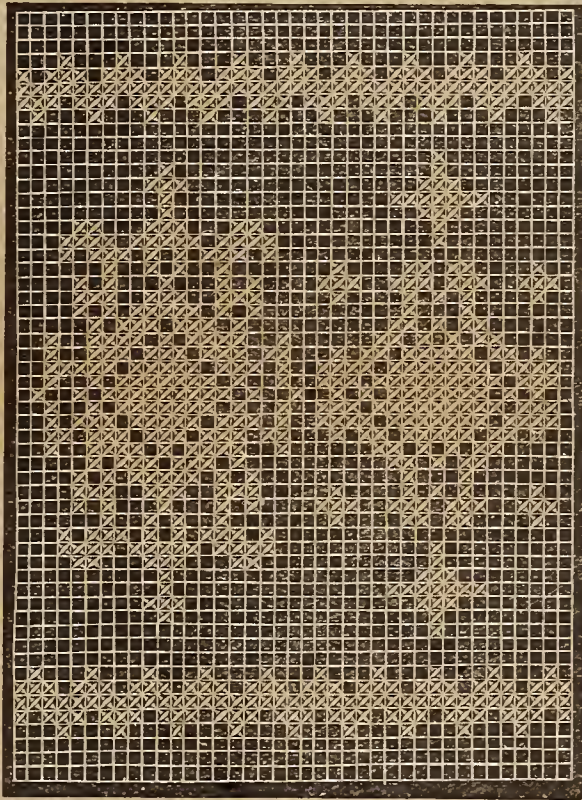
it a flavor; also a small spoonful of rice and two eggs, instead of one. These added ingredients make a marked improvement in the richness, making the soup a very satisfactory and nourishing meal of itself, with bread or crackers, canned fruit and pie, or pudding for dessert. With meat and other courses, the recipe as given will make the soup sufficiently rich. If young housekeepers who went from the school-room to the kitchen, with no knowledge of cookery whatever, get discouraged, let them try this, and they cannot fail of success, being so easily and quickly done. We use an egg-beater; but if she has none, use a spoon or fork until she can persuade "John" to get one. Divide the recipe at first, except the egg, for a small family, and it can soon be ascertained whether it makes enough for a meal or not.

Burn all bones for hens, through the winter at least, when they get nothing of this nature except what is fed them. Put them in the back side or end of the stove-box where they will not interfere with other arrangements, and when they are white and will crumble, take out and make fine. Corn is no more eagerly devoured by them. If fowls are not kept, bury them with cast-off boots and shoes, under the grapevines in the spring. The rubbish is then out of sight and a help to the vines. If no vines are being cultivated, burn and throw on the ash-heap for the land, or give to some bone-picker. Such things are an eye-sore on some premises year in and year out.

H. E. M.

SOAP.

A valuable recipe that I gave some years ago for making soap is asked for by an old subscriber, and as so many new ones



CROSS-STITCH PATTERN.

have come to us, I know they will like to try it also.

Take one can of concentrated potash to four pounds of good, clear grease. I bought beef tallow for the purpose, as I had no accumulation of fat, as some do who use a great deal of pork. If you have that kind of grease, it must be carefully tried out and strained. Dissolve the potash in two gallons of lukewarm water. Melt the grease and let it get lukewarm; then turn the dissolved potash into the grease, being careful not to lean over it, as very strong fumes arise from it, and remember the potash must be poured into the grease. No boiling is necessary. Stir thoroughly for fifteen minutes, away from the stove.

Line a shallow, wooden box with old muslin, and pour the mixture into it; set in a warm place and cover tight; then throw a heavy piece of carpet over it. Let it stand four days, when you can cut it into cakes and set away to dry.

If a perfume is desired, an ounce of any favorite odor will make it quite nice enough for toilet use. We used it to the exclusion of any other soap for a long time, both for toilet and kitchen use.

CHRISTIE IRVING.

IN DARKEST AFRICA.

They did not have a "Horse Book" or a "Pioneer Buggy;" if they had the Rear Column would not have been in disgrace. Send 10 cents, silver or stamps, and learn how to cure the Horse, and where to buy the Buggy.

Pioneer Buggy Company, Columbus, Ohio.

FOOT BLANKET.

In arranging the extra blanket or pretty cheese-cloth "dozer" on the foot of the bed, fold it so that if required during night all you have to do is to reach down, grasp the upper fold and draw it up over you. To do this lay it in three folds—more if necessary—back and forth in a pile, with the edge of the last one, which will be the end of the blanket, toward the head of the bed. It is a little thing, of course, but little things make up the sum of earthly comfort here below.

"One lesson, Shepherd, let us two divide,
Taught both by what she shows, and what conceals
Never to blend our pleasure or our pride
With sorrow of the meanest thing that feels."
—Wordsworth.

WOMAN'S WORK.

Mrs. Estelle E. M. H. Merrill (Jean Kincaid), editor of the journalistic department of the *Business Woman's Journal*, also edits a new department in the Boston *Sunday Globe*, devoted to the interests of women's clubs.

Miss Minerva Parker, architect, of Philadelphia, who does a large and flourishing business, is now at work on the design for the Isabelle pavilion, which is to be erected on the grounds of the world's fair by the Isabelle Association.

Mrs. C. L. French, of Knoxville, Tennessee, has been recently appointed police matron of that city.

Miss Kate Marsden has been given permission by the Empress of Russia to visit various parts of Russia and Siberia for the purpose of seeing and noting the condition and method of treatment of the lepers in that country.

Mrs. A. Lietz, of New Orleans, is an undertaker and the proprietor of an establishment which includes all branches and details of the business.—*Woman's Journal*.

Miss Amanda Cornell, who has charge of the shoe department in Macy's, receives a salary of \$5,200 a year. She goes along the streets on fine afternoons looking for pretty feet and never seeing the face of a passer-by, studying designs for new shoes and hunting, too, for models.—*New York World*.

Miss Nellie Kelly, of the *Ohio State Journal*, at Columbus, is a regular "first-wire" operator of the Associated Press and receives thirty dollars and fifty cents a week, the same salary that is paid to first-wire men. She is said to be the only telegraph woman in the country holding such a place. At 5:30 every afternoon Miss Kelly takes her seat upstairs in the *Journal* office. In front of her is a typewriter, and close behind her is the eternally clicking "first-wire" of the Associated Press. As fast as the receiving instrument clicks, Miss Kelly copies its messages on the typewriter in the shape of neat "copy" for the paper, taking 15,000 words a night. At 2:30 a. m. she rises from her typewriter beside the telegraph instrument, draws a sigh of relief and goes home, alone and safe. She has never missed a night, and the *State Journal* praises her work in the highest terms.—*The Phonographic Magazine*.

One of the most indefatigable workers of the capitol is Miss Flora E. Powers, the stenographer to the attorney-general. There is a great rush of business in the office of the attorney-general at present, and Miss Powers does not, as a good many of the officials do, leave when the official hours of duty close for the day. For many evenings past she has worked till very late at night and does not absent herself even on Sundays. The young lady takes great pride in her work and is possessed of an amount of legal acumen that would do credit to many a prosperous pleader in the halls of justice.—*Washington Cor. St. Paul Globe*.

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NEW HAVEN CHAIR CO., New Haven, Ct.

Our Fireside.

A PLEASANT THOUGHT.

Sometimes when I get to thinking,
And that's most every day,
I have the queerest of fancies
That come in the queerest way.
Many of my thoughts are pleasant;
There's none of them very sad,
But one of the pleasantest of them all
Is about a little lad.

And, children, I've never seen him,
This little lad of mine,
I can tell you nothing about his looks
Or whether his clothes are fine
Or coarse. Sometimes they're shabby,
It seems, and patched and rent.
But then what matter that, my dears,
To our future President?

You see, when a tiny princeling
Comes to his mother-queen,
The booming of mighty cannon
(Though the ocean roll between)
Tell the whole wide world the story
Of the birth of a baby king,
And shouts of a glad rejoicing
Make the very echoes ring!

But when our little ruler—
Our little prince is born,
There may be only a thrush to sing
The news to the ears of corn!
And isn't it funny, children,
That some of your hours are spent
(Though you know it not) in school
or out,

With our future President?

What if his clothes are shabby?
What if his shoes are old?
What if he wears a tattered cap
Instead of a crown of gold?
Let me advise you, children,
To follow the Golden Rule;
Then some glad day you can proudly
say:

"Why, we were friends at school!"
—Eva Best, in *Detroit Free Press*.

SISTERS, BUT NO KIN.

BY MARY TWOMBLE.

CHAPTER I.

ESTHER WYNN had nearly finished breakfast that May morning when her grandmamma's neatly-capped French maid handed her the following letter. She glanced indifferently at the ill-formed handwriting, looked surprised as her eye caught the postmark, and then tore the letter hastily open. Before she read six lines all thought of breakfast had deserted her. This is what she read:

"DEAR SISTER ESTHER:—Maybe you'll be surprised to get this letter from me, but I guess you can't be much more surprised than I be at having wrote it, now it is done. It took me an awful long time to spunk up courage to get about it. I have heard all about how rich your grandmother is, and Mandy Hodgkins that works in Boston—her that lived on Breed's Hill, you know—sends me a Sunday paper now and then, and that keeps me posted about all the swell parties and things you tend out at. Now, the long and the short of it is I'm a gettin' desperate sick of being buried alive up here in these mountains, and I want to get to the city, too. Every dog has his day, they say, and I want mine. I don't bend to the notion that some folks should have everything and others have nothing. The society papers calls you quite a belle. Well, I suppose you be, and I'm sure it gives me big hopes for myself to know you are reckoned such, for you must allow that when you and me was together at Ridgeville, five years ago, folks was not likely to give me a second best seat when looks was the topic. But I guess I won't say much more on that score just now; modesty forbids. Only that I would just like to add that I think fashionable folks make belles out of girls on mighty small capital. I come to this conclusion last summer when I see a girl up here that was called a belle, for fashionable folks have got to coming this way for their health, sometimes nowadays. Well, that girl hadn't a mortal thing 'cept just her hair, which was pale gold, and lots of it, and my opinion is she belled it just on the strength of that hair.

"I'm prepared to have you think me cheeky for writing this letter. I remember how disagreeable it used to be for you sometimes at our house, and how hateful to you I often was. But you was always forgiving, and I live in hopes high life ain't spoiled you. I want desperate bad to come to the city, and I don't know a soul there 'cept you and Mandy Hodgkins. I've got no more money than enough to take me there, and even if I had I'd be mighty 'fraid to go without any place to go to when I got there. Now, do you suppose you could git 'round your grandmother so's she'd let me stop at her house till I got work? I don't know yet what I shall work at, but as everyone allows, I'm smart enough to turn my hand to most anything. I don't stand 'round much, fretting about that. Just let me get once into the way of being seen and known, and I ain't afraid to try my chances with the best of them. Begging a speedy answer, I remain, as ever,

ALMEDA POORE."

Esther's cheeks changed their tints many times, and her eyes dilated in wonder as she read. Her grandmother, who sat opposite, noticed all this and asked if her letter contained unpleasant news.

"Yes—no—that is, I hardly know," stammered the girl. Then, after a pause, she

handed the letter to her grandmother, saying: "You might as well read it at once, grandmamma, since on you alone depends the answer I must send."

Madam Reignold, as Esther's grandmother was called, to distinguish her from another Mrs. Reignold, her son's wife, a popular, young matron in society, was a dame of the old school, so stately of mien and countenance that someone had once likened her to an ancient poplar, which, despite falling foliage and gnarled trunk, held its perpendicular pride against time's defacing hand. As she read the illiterate letter before her, the uncomely hue of a hot temper overspread her face. She threw the letter on the table and gazed at Esther in silence.

Esther summoned courage to ask:

"Well, grandmamma, what shall I say to her?" though her eyes drooped as she put the question.

"If you feel that you must answer such a jumble of ignorant impudence, do so briefly, saying, merely, that the request is an impossible one. But silence would be the only fitting answer. Why, the girl is shocking! I had not conceived of anything so almost incredibly vulgar."

"Poor Almeda! She is, I suppose, very vulgar; but her excuse is she does not know it. Why, grandmamma, she could not possibly know in advance how such a letter would

Reignold did not take trouble to trace her genealogy further back than that, but remained entirely satisfied with this as a basis from which to draw a patent of nobility that newer people could not dare infringe upon. It vexed her temper and crossed her very soul to see people entirely outside the pale of her own social environment "forget their place," as she phrased it; and her repeated visits to Europe, and admiration of its well-defined social lines, by no means lessened her estimate of her personal importance at home.

"But, grandmamma, I don't want to seem unkind to Almeda. I owe the Poore family a great deal," said Esther.

"Nothing, I fancy, that money cannot pay; and I don't think I have been niggardly in my settlement with this girl's father," answered her grandmother.

"Of course not, grandmamma; but there are things that money cannot pay for."

"Not with people of that sort."

Esther did not dispute. "What can I write her, grandmamma? I cannot possibly put into words a refusal of that sort," she said.

Her grandmother remained silent for a moment.

"You may write her from yourself as pleasantly as you will," she said, at last. "You may tell her that you are not at liberty to ask her here, and have left the matter with me. I shall also write her as I think best, and enclose

reports of the newspapers, with all their exaggerations, inflated Almeda's untutored imagination till she forgot the difference of family connections and all that was on Esther's side, and fancied that she, too, Almeda Poore, had only to come to the city, see and be seen, to gain a footing in any society she chose to enter. Her ignorance of the world in general, and of Madam Reignold in particular, made her pen that letter in the full hope that Madam Reignold would really ask her to her house; and that, in Almeda's opinion, was all that was needed to launch her into the full tide of social prosperity.

Esther realized fully how keen would be the disappointment and chagrin occasioned by her own evasive note, and the stormy desire for vengeance that would follow upon receipt of her grandmother's polite but haughty denial and enclosed aid, though she felt no doubt but the latter would be accepted. She put all the tact and kindness she could summon into the wording of that note to Almeda, and at last mailed it with a lightened conscience but many misgivings as to Almeda's next step.

CHAPTER II.

Madam Reignold's indulgence of her granddaughter was often commented upon by that lady's acquaintances, for overindulgence towards anybody was a trait for which Madam Reignold had never been noted. Indeed, those who commented upon her present attitude were quite ready to add that it could be nothing else than a sort of atonement for former exactions towards Esther's mother, for Madam Reignold headed a curious bit of family history of which Esther might be called the sequel.

Judicious marriages had always been her strongest hobby, and one that she had been true to herself even in early youth. Her own marriage had been a perfect illustration of this. Her late husband, Elerton Reignold, had been a great "catch" in his day. His family was as unimpeachable as her own, and he not only inherited money, but had the rarer distinction of knowing how to increase his inheritance.

There were, however, many points of difference between Madam Reignold and her husband. While she was exclusive and exacting, he was open and genial to a degree. It was owing to this, no doubt, that he saw no danger in admitting to his house, occasionally, a young clerk in his employ named Wynn. His wife, on the contrary, saw impropriety and scented danger; and when she discovered that an attachment existed between him and her daughter, she suffered less from surprise than from the righteous rage of an angry prophetess. The father was surprised and somewhat dismayed. Expostulations were vain. The attachment between the young people was suspended, but could not be broken off.

While the matter was in this state, Mr. Reignold died, leaving full management of his affairs to his wife. Madam Reignold's course was peremptory. She ordered the young man never to cross her threshold again, and positively forbade her daughter to speak to him should they meet. The result shocked society in general more than it surprised those intimate with the Reignold household.

Esther Reignold married Harry Wynn against her mother's wishes. Her mother was relentless, and soon the heavy shadow of her displeasure surrounded the young couple like a pall. Society as well as means deserted them. All this happened in New York, whither Mr. Reignold's business interests took him to reside a few years after his marriage.

Mr. Reignold's death threw Harry Wynn out of employment, and when a much humbler place was offered him in a small, New England town, his wife thankfully moved thither with him, and for a time they disappeared from the sight and knowledge of those who had known them. Not long after this—as soon as her husband's affairs were settled—Madam Reignold removed again to Boston, her native town, where she had always preferred to live, and where all the minute circumstances of her daughter's unfortunate marriage were less well known.

But Harry Wynn did not succeed well in his new place. He lacked, in truth, something requisite for business success. He made many changes, and finally went to try his fortunes in the West, leaving his wife to follow him after he had established himself there. Some time before he left a child had been born to them, and not long after this event the wife's health began to decline. Still, although informed of this, her mother took no notice of it, nor of her financial condition, and to all appearances forgot her very existence.

Poor Mrs. Wynn continued to hear from her husband, but she could glean little hope from the accounts he sent. Things grew worse and worse with her. It was during one of the attacks that rendered her helpless that her little daughter, now two years old, wandered away from home one day. In the tenement



quarter of Oldport, where Mrs. Wynn lived, straying children were no rarity. It was common enough for the neighbors to see little ones wander about at their own sweet will, cared for by other children of somewhat older growth, through whose aid they generally found their way home again. When little Esther was seen thus at play, nobody minded it. Such of the neighbors as had a moment to spare thought much more of running in to perform some needful office for the ailing mother than watch the movements of the child.

While Mrs. Wynn was about, she had scarcely ever allowed her child to leave her sight. Perhaps it was the sense of her unusual freedom that worked unconsciously upon the little one and caused her to wander away at her first opportunity. The quarter of the old Maine seaport in which they lived was not very far from the water front, and thither the child wandered.

It was the noon hour, and no workmen happened to be about the dock that she had reached in safety. Finally she came to some steps that led down to a platform to which a boat was moored. With the instinct that all children have for climbing stairs, the little one crept downward and reached the platform, crept from that into the boat, which happened to be on a level with it, and sat there rocking with delight at the slight movement of the boat upon the placid water. Soon the wearied child fell asleep and lay still, her face half hidden in the bottom of the boat. No one saw her but a mischievous lad that hung around the precincts of an adjacent lobster-shop. It was a favorite haunt of the lads. Only the day before one of the "lobstermen" had given him a somewhat severe chastisement for making too free with the contents of the lobster-pot. It happened to be the very man to whom this boat belonged—a fact which the lad quickly recognized, and as quickly decided that this was his chance to "get even" with his castigator. The possibility of this child being any other than the man's own did not occur to him. He saw only the chance to give him a terrible "scare." So, hastily cutting the boat loose, he gave it a push down stream, and then ran as fast as he could out of sight.

Israel Poore was a fisherman who lived on one of the islands "down the bay," about twenty miles from Oldport. Sailing homeward from another direction the afternoon of that same day, he espied, a short distance to leeward of him, an apparently tenantless boat, and thinking it might be the drifting property of some neighbor whom he knew, he turned his boat in that direction, and to his astonishment saw in the bottom of the drift a sleeping child. He examined the boat fore and aft, but save for a meaningless little name at its stern, he could find no clue to ownership. Next he studied the direction in which the boat had been drifting, and judging from that and the change in the wind during the last couple of hours, made a rough guess as to whence the boat might have drifted. He lifted the child out, pushed the boat in the supposed direction whence it had come, and then placed the child tenderly in the bottom of his own boat.

It was near upon evening when Mr. Poore arrived home. As he entered the kitchen, where his wife was preparing supper, she turned to greet him. "Whose baby is that?" she asked in surprise, as she first noticed the awful he carried.

"That's just what I'd like somebody to tell me," answered her husband; and then he related the circumstances through which he came by the child, adding that it had cried a good deal, and he supposed it was lonesome.

"Lonesome! O' course it is, and starved," echoed his wife, as she bustled back to the table and placed some milk upon the stove to warm. Then she took the child, turned it round about and thoroughly examined its clothing.

"They ain't a mite or mark about it to tell where it came from or who it belongs to," she said, at last. Then she fed the little one while it continued to cry. "Israel, this child's clothes ain't cost much, if they be real tasty in the make-up of them," she continued, as she took a second critical inventory of the child's belongings. "I guess it don't belong to no rich folks."

"Well, I don't presume to know much about children's clothes, but I come to them conclusions myself when I found it driftin' about in an open boat," answered Israel.

"Land o' Goshen! That wan't no sign; rich or poor, o' course nobody that cared for the child put it in a boat an' pushed it out to sea to git drowned. Israel, my opinion's that we'll never see hair nor hide o' them that this child belongs to. Bet ye a dollar ye'll never see it advertised."

"Well, I've figgered some on that, too, an' I've about made up my mind that in that case we'd about as well keep it. It's a pretty child, an' a mighty likely looking one every way, an' we ain't got none o' our own as yet."

"Humph!" ejaculated his wife. "If it was a boy you picked up, instead of a girl, I'd be more ready to agree an' look upon it as a sort o' Godsend. Now that you've made up yer mind to move up to New Hampshire and work that farm that yer mother's folks left ye, a boy might come in real handy."

"Yes, for me; but I don't see why a gal mightn't turn out about as handy for you," struck in Israel.

"That's true enough; but after all is said, I never was no hand for believin' in bringin' up other people's children. What's yer name, baby?" she asked, as the little one, now fed and made comfortable, sat looking into her face wonderingly.

"Essa," answered the child.

"Essie?" Well, now, that's what I call pretty platu for such a mite as you be."

"Essie what, dear?"

"Essie Inn," lisped the child, after a pause.

"Inn? Well, I can't make much out o' that, but I'm glad to git the first name so plain. Well, Essie, you've got to stay here, for the present, anyhow."

And from this unsettled beginning Esther Wynn found a home, such as it was. She might, in truth, considering the circumstances, have easily found one much worse, for she lacked none of the absolute necessities of life; and while her childhood lacked all of life's refinements, no vicious examples were ever set before her.

The next day after she was found, Israel Poore caused a notice of the same to appear in a small, local paper. Whether the notice was ever copied outside or not he never knew. In little more than a week after that he removed from his island home to his lately-acquired New Hampshire farm, with the intention of farming one part of the year and going on fishing trips during another portion of it.

Thus it happened that the Poore's, who never took the trouble to read a city newspaper, quite escaped learning aught of the brief stir that was afterwards made to recover the missing child. In fact, they had soon become so accustomed and attached to her that they would prefer not to hear of it.

Little Esther had not been gone more than a couple of hours when her absence was noticed and a cry raised in her small and obscure neighborhood. Inquiry was made and search followed, but no trace of her was found. The lobsterman's boat was found outside the harbor and towed home by one who knew it, many days later, but no one thought of associating the boat with Esther's disappearance.

Meanwhile, news of the child's disappearance was kept from the sick mother as long as possible. Finally, the doctor who was called in to attend her, and who, in the course of attendance, had gotten from the sick woman something of her history, took upon himself to write to Madam Reignold a brief but unmistakable statement of her daughter's condition. A neighbor had already written on the same subject, but there had been no response. But the doctor's more official letter drew forth a response, together with a sum of money to buy necessities for the sick woman, and a request that Madam Reignold be kept informed of her condition.

But the next information that lady received was brief. It was a telegram announcing her daughter's death. This was a terrible shock to the proud woman. After this she made many but unavailing exertions towards discovering the fate of the missing child. It finally became the general opinion that she was not to be found. Still, her grandmother did not give up hope for many a day.

Quiet as was Esther's life in her remote, country home, it was not without its small events and changes. Mrs. Poore at first petted the child and did all in her power to make good the loss of her real mother; but when Esther had been in her charge about a year, a child of her own came to Mrs. Poore, and after that little Esther became conscious of a difference.

As time went on, Mrs. Poore's own child, Almada, and Esther grew up together very much as two little sisters of such a family might, and in course of time two little brothers were added to the family. All this, of course, told against Esther's chances of personal popularity. In the Poore household there were many complaints, criminalations and recriminations, but throughout all Israel Poore stood out as Esther's best friend. He always said that the finding of her brought him luck, and he felt sure she would turn out a "trump card" in his family yet.

Esther was just fifteen, and her so-called sister, Almada, twelve when the turning point in the family's fortune came, and came in a most unlooked-for way. Almada was sitting on her father's door-step one summer afternoon, when a strange woman, middle-aged, tall, lean and weary-looking, carrying a good-sized satchel at one side, came forward and asked:

"Is your mamma at home?"

"Yes, ma is, but she's awful busy in the kitchen. This is the day she does all her baking for a whole week ahead, and she hates to see callers."

"I am sure I don't blame her in the least," said the stranger, in a tone that Almada thought wonderfully sweet for so tired-looking a woman; "but you see, my dear, I am not exactly a caller, who comes only to pass away an hour. I am an agent for the sale of certain books. I have several interesting ones with me now. There is one, especially, that I know a little, young lady like yourself would like to have. It is all about manners, etiquette; what they do in the best society. I am sure your mamma would like you to have one."

While she spoke she held the book temptingly in her hand. Almada took it, opened and glanced through it. In another moment she had sped indoors and was heard calling her mother at the highest vocal pitch.

The stranger smiled, walked quietly in, and when Mrs. Poore appeared, was seated serenely in the most comfortable chair in the best room.

"You will excuse me, I'm sure, for taking a seat here. I am so very tired, and your room is so deliciously cool, sweet and inviting," she said.

"You're quite welcome, ma'am," said Mrs. Poore, not indifferent to the compliment.

"Ma, you've got to buy me this book; they ain't any use sayin' no," Almada was insisting.

"La sakes, child! You've got more books now than ever you'll read. See that settlin'-room table there full of 'em."

"But, ma, this is another kind of a book; all about high life and things. Mandy Hodgkins' mother got her one, and Mandy told me in a secret her mother couldn't afford it one mite, and was agoin' to pick and sell berries enough this summer to pay for it. Now, do you want Mandy to git ahead o' me?"

"At that rate I suppose you must have one," laughed her mother, "and if it's got to be paid for by berry picking, I won't go myself; I'll send you and Esther out to pick them." "Ain't Esther here yet? Land sakes, how that girl does loiter a comin' from school!"

Esther was at the moment crossing the sward fronting the door, and overheard this. "I had to do an errand, mother, that is why I was not here sooner," she said, coming in.

"Is this your daughter, too?" asked the book agent, eyeing Esther critically.

She was a lovely-looking girl, though still unformed. Her face, which was somewhat dark and pale, was, in the community she lived among, called less pretty than that of Almada with her blonde hair and pink and white bloom; but about Esther's face and figure there was an air of distinction that Almada would never reach. The book agent's practiced eye took in this difference.

"Well, she ain't my own born daughter, but she's about the same. I've had her since she was a two-year-old baby."

"Ah! Adopted?"

"Yes."

"And her name is Esther. How much that name brings to my memory. I had a great deal to do with it in my youth. Excuse me for being so curious, but what was her family name?"

"That I can't tell you, for I never knew."

"Good gracious! How queer!" exclaimed the woman who had risen and now sat down again. "I beg you will tell me what you do know about her, and how she came to you. I assure you I have a good reason for asking."

Mrs. Poore was not well pleased. She was rather too busy to be in the mood for a long talk. Nevertheless, she told briefly all she knew about Esther.

As she hurried over the details, the book agent seemed quite overcome, especially so at the relation of the finding of the child in a small boat; but Mrs. Poore did not fail to perceive that the woman's emotion was due as much to joy as to astonishment.

"You seem to take an awful sight o' interest in the story," she remarked.

"So would you if you were in my place. I little thought when I came into this village to canvass for the sale of books, I was to come upon a 'find' like this, for the discovery of Esther Wynn will be a benefit to me as well as to you."

"Wynn? La's a mercy! That just explains it. When that child was found and I ast her her name, she kept a sayin' 'Essa'—which I guessed fast enough was Esther—Essa Inn, and I couldn't make nothin' out o' the Inn. After a little she forgot it, as two-year-old children will forget anything that isn't kept all the time before 'em."

"Just so. Now, then, let me briefly tell you that for several years I lived in the household of Madam Reignold, in New York, who, I am certain, is this girl's grandmother. To cut a long story short, for the present I will only say that her only daughter married against her wishes and was entirely cut off. She went away into another town to live, because very poor, and just before her death lost her baby girl, who mysteriously disappeared without a clue by which to trace her. Not long ago I happened to find a clue. In the town in which they lived a sister of mine lives, also. Her next-door neighbor has a boy who fell sick and was at the point of death some time ago. It was during that time that he gave the first intimation of the part he played, years before, in cutting loose a small boat into which a baby had crawled, and letting it drift out to sea. He did this under the impression that the baby belonged to the man who owned the boat, against whom he held a grudge, and whom he wished to frighten. The mistake he had made, and the result when the boat came back empty, always haunted the boy. The few people who knew of his remorseful story too late to remedy it, kept it pretty quiet, but I never had a doubt but that baby and Mrs. Reignold's grandchild were the same. Now I know it, and so shall she. The strong family likeness in the girl's whole face and form struck me so forcibly that it fairly bewildered me a moment before I could place it."

It is needless to dwell upon the sequel to this discovery. The moment she was apprised of it Madam Reignold came in person to verify the story. She did so to her satisfaction, made a handsome settlement with Israel Poore for his rescue and care of her grandchild, and did not forget to do the same with her whilom waiting-maid, the book agent. She took

Esther home, and during the next five years spared no pains to repair the deficiencies of her early education.

Esther made rapid progress, and at twenty no sign remained of the early conditions under which she had struggled. The book agent, who had been the efficient means of Esther's restoration to place, looked upon herself as quite a heroine. Nor was she wrong in predicting that Madam Reignold would pay handsomely for the discovery she had made. Madam Reignold was, in this respect, equal to all that was expected of her.

CHAPTER III.

"So your grandmamma does not approve of Miss Poore's contemplated visit, Esther?"

It was the younger Mrs. Reignold, Mrs. Bob Reignold, as she was familiarly called, who spoke. She was a fine-looking woman, of genial presence, and as independent of speech and action as a Boston woman, sure of her social footing, knows how to be. "Mrs. Bob" was very sure of her's; her male ancestors for four generations had been men of national repute in one profession or another. A few friends had dined with her this evening, and they were all now sipping their after-dinner coffee.

"I do wish Mother Reignold were not so excessively punctilious in regard to *les convenances*," she added.

"Ah, do not say that, Mrs. Reignold," spoke an elderly young man of the party, Mr. Reignold's business partner, who had just dropped in. "There are so few of her kind left; most people are getting too lax."

"And so much the more comfortable," smiled the hostess. Logically speaking, you know, Mr. Alton, all this care and guarding against intrusion from outside is a remnant of barbarism. It was what our struggling, fighting old ancestors did when they robbed their neighbors and then set up claims of nobility on their power to keep out or slaughter those they robbed. The analogy holds good to-day. It is the strugglers who are most fiercely on guard. Certain people ought to feel as our own Emerson suggests the solar system does, which never gets nervous about its position."

"Your comparison recalls another historical analogy, Mrs. Reignold," spoke Dr. Ashmead, a young physician from New York, who had been sojourning a few days in Boston. "Read of what people and time you may, you'll find that those who felt civilized enough to conquer and subject adjacent barbarians, were prone to become so fascinated with the freedom of barbarian customs as to revert to them again when they came into close contact. To-day it is the people of highest civilization and power that are the most natural in manner and conduct. In this they touch again upon the simplicity of the uncultured. The apes, the Philistines and the strugglers find largest room to flourish amid the great middle section of humanity."

"Despite all of which I stick to the conventions; without them, chaos would come again," answered Mr. Alton.

"So do we all stick to the conventions, of course, but chiefly for their convenience," said Mrs. Reignold. "The most trivial of them saves us a deal of wear and friction. Why, the part played by bits of pasteboard alone is an immense saving of time and strength. You have not given us an opinion at all, Mr. Cazenove," she added, addressing the remaining gentleman of the group.

"Because I leave you subjective people to settle it among yourselves. My trade is objective. Artists are supposed to deal only with surfaces," he laughed.

Cazenove was the least like a man of surfaces of anyone of the four men present. He was of medium height and strongly built, with more power than beauty in his face. His features, however, were not uncomely, and were, moreover, full of expressive play. His chief attraction to strangers was a pair of large, hazel eyes that seemed to emit electric sparks of intelligence as he talked on any favorite subject.

Dr. Ashmead, who was tall, slight and of graceful build, with a clear complexion and rather pensive-looking, brown eyes, would fill a sentimental lady's ideal of an artist much more readily.

Mr. Alton was small, thin, dark, wily and primly conventional of aspect.

Mr. Reignold had no very salient points through which one might individualize him by description. He looked what he was—a prosperous man of business. Like his wife, he was fair and opulent of person, but he lacked that lady's supply of high spirits.

Esther Wynn made a perfect foil to her young matron aunt, who was not, in fact, more than six years her senior. Whereas, Mrs. Reignold had much of the ordinary, roseate

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bloom of a fair-complexioned woman, Esther's coloring was unusual and picturesque. She was above the ordinary height of women, and of a slender stateliness of build. Her face was oval and her features regular. A fair palor, that had the elastic clearness of health, was her prevailing complexional tone. Her hair was a tawny brown, and her eyes so many shades darker than in certain lights they looked positively black and very luminous. Eyebrows and lashes were of the same dark hue. It was, in short, a face of odd and attractive contrasts, much as her mother had been before her, and inherited from mixed racial strains in the family.

"I feel quite in the mood for doing something a bit sensational, Esther," continued Mrs. Reingold. "Supposing I write and invite this little country girl to visit me for a week."

"As you please," said Esther, looking demurely down. "I shall commit myself to no advice."

"Who is it you are speaking about?" asked her husband, who had an oftentimes convenient habit of not hearing all that was going on.

"Oh, an acquaintance that Esther made during her sojourn in the country," answered his wife, lightly.

It had become a habit in the family to refer in this way to the odd episode in Esther's life. All present, except Dr. Ashmead, understood what it covered, and the family never troubled themselves to circulate the story outside the quarters in which it was already known.

"Yes, I will have her here," she continued. "I will let her see such of my friends as care to meet her. It will prove diverting all around, and may be of benefit to the girl—wake her up into seeing where she is. Practical experience is always valuable, and to a girl having her own way to make, cannot come too soon."

"Ah, the self-made girl is becoming quite an American institution," said Cazenove, with the slowly-coming smile that formed one of his attractions, playing about his lips and the growing light in his eyes. "We have had self-made men in abundance, but we were not unique in producing these; other people have had them, too."

"And other people have had their self-made women, too. Why, Europe has teemed with them, and that in the long past," said Ashmead.

"Yes, perhaps in certain sections and certain places in society. France, which has been noted for its clever women generally, has been especially so for her *intriguants* at court, who, through power of beauty and brains, repaired their own and their family's fortunes. But then about all of them were women of family; none worked their way out from unknown beginnings," said Cazenove.

"Catherine, of Russia, born a peasant and dying an empress. What of her? Even Joan of Arc I should look upon as a pretty fair sample of a self-made young woman, considering the remote time and conditions she lived under," said Ashmead, in a tone of lazy drollery.

"Go on," smiled Cazenove.

"It isn't worth while," said Ashmead. "As our back country cousins would say, 'the woods is full of 'em' everywhere. England, perhaps, has had a few shining examples as any country of note; not, probably, through any lack of desire on the part of English women to make themselves, but simply because they don't seem to know how. An English woman is probably as likely to stay where chance puts her as any woman in the world."

"Lady Blessington was a shining example to the contrary. She claimed, of course, to be a woman of family, but her claims ran too far back for most people to trace," put in Mrs. Reingold. "Unquestionably she was a woman of brains, despite the mediocre quality of the writings she has left. The testimony of the ablest men of her day prove that. She was evidently one of those rare women who gave forth so much in personality that there was little left for literary art."

"And she was an Irishwoman, which largely explains both her charm and pliability of temperament," said Ashmead. "So were and are a goodly number of the brilliant, so-called Englishwomen one meets to-day, both in and out of literature. So were the Gunning sisters, whom Horace Walpole detested and immortalized."

"And they had no sort of ability to make themselves. It was the blindest chance, coupled with their great physical beauty, that made them marry a pair of reckless lords," said Mrs. Reingold.

"Which just helps me with an illustration of what I said before, that the American self-made girl is unique in her way," insisted Cazenove, good-naturedly. "The self-made woman of other lands has first gained recognition through her power to charm some man, whether she married him or not. But the self-made American girl does not hold herself dependent upon any such chance. She arises from—nobody knows where; she sets up no family claims, apocryphal or otherwise; if her family exists, she keeps it discreetly out of sight till she has established her claim to be looked upon as a personage in her own right. She does not solicit the protective aid of any one man, but seeks to conciliate and please as many men as possible; business lies that way. She may turn poet, paluter, writer, business or society woman, she will conquer her way or die in the attempt; and if she marries well, it

is on the strength of the reputation she has earned. The type is so peculiarly American that it is looked upon with much interest abroad."

"You understand it so well, Cazenove, that I should think you'd feel inspired to paint it. You might realize something out of it abroad," said Alton, quizzically.

It was easy to perceive that no affinity of tastes or personal liking existed between those two men, whose meeting thus was pure accident, and not at all design on the part of their hostess.

Cazenove smiled. "You mercantile men understand so little the limitations of us poor painters that you are always setting us impossible tasks," he said.

"Why impossible?" queried the other, in the same tone.

"I'm afraid I can't make you understand," said Cazenove, with gentle mockery. "The difference between things paintable and unpaintable does not readily appeal to a logical man like yourself; it is quickly felt only by creatures of the senses like us painters. The self-made girl may or may not be a picturesque personage to look at, but in that she would hardly differ from her sex in general. The traits that differentiate her are mental, and mental phases are seldom objective enough to make a sensation on canvas."

"I should think you'd find it deuced hard to strike upon a novelty," continued Alton, superciliously.

"We do; that's what keeps most of us so deuced poor. There are few bonanzas in painting," answered Cazenove dryly.

Alton seemed a trifle disconcerted. Instead of making any defence, Cazenove seemed to be playing his own words back upon him.

"I dare say you are right," he said. "How, then, do you account for so many entering upon a calling in which there is so little profit?"

"I account for it chiefly on the ground that art has become fashionable. The sons and grandsons of the early Puritan merchant having inherited money to travel upon, have discovered a world of things of which ancestral tastes had deprived them. Having successfully conquered the realm of trade, they now desire to conquer the realm of art, with the result that we see a quite creditable amount of technique, but very little inspiration among our artists."

"Then you mean to assert that the sons of merchants have no right to be artists?"

"I assert nothing of the kind. The son of any man has a right to become an artist if born to be one, but he can no more make himself one than he can make himself a poet if not born one. All I would affirm is that the whole history of art shows that the sons of artisans, workers in gold, silver, metals, tapestries and kindred things, are more likely to become true artists than the sons of men who spent their lives and thoughts on text or account books, giving little or no heed to the outer play of natural phenomena."

"Climate has an immense deal to do with the thing, though," spoke Ashmead. In France, Italy, Spain and other countries they have color, outdoor pageant, life, movement, all sorts of striking physical effects. In England they have more fog than color, and the same thing gets into their painting."

"No, the English are no colorists, and they are too fond of trying to paint ideas rather than effects. But it suits the English people. They are patriotic enough to pay their favorite men better, perhaps, than any people in the world. It is no great loss to English painters that no one but their own countrymen buy their work."

"We do not take after them in that, certainly," said Esther. "It is positively deadening to native talent to watch the slow sale of excellent native work at any of our exhibitions, and then be told the prices that are paid for tawdry, imported things."

"We are not old enough, my dear, to have grown a deep-rooted, national conceit with all that is our own, as the English have done. If we ever reach that, it will take a long time, we are so vast in territory and detached in population. Meanwhile, some of us are trying hard," added Mrs. Reingold, with a laugh.

"Have you decided to take a studio in town for the next season, Mr. Cazenove?" asked Esther.

"I have already taken it. Queer time to take one, in the spring, I know, but for the very reason of having come home so lately with a lot of traps, I need one the more. I expect to have it in order in a few days, and shall be delighted to have you ladies—and gentlemen, too—come in to inspect it. After it is arranged, I shall make a succession of sketching raids out of town during the summer."

All having promised to go—Alton, even, having politely nodded assent—Cazenove and Ashmead took their departure together, while Esther did the best she could to make agreeable an enforced tete-a-tete with Mr. Alton till the time came to return home.

[To be continued.]

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Our Sunday Afternoon.

— MAKE SOMEBODY GLAD.

On life's rugged road,
As we journey each day,
Far, far more of sunshine
Would brighten the way,
If, forgetful of self
And our troubles, we had
The will, and would try
To make other hearts glad.

Though of the world's wealth
We've little in store,
And labor to keep
Grim want from the door,
With a hand that is kind
And a heart that is true,
To make others glad
There is much we may do.

And a word kindly spoken,
A smile or a tear,
Though seeming as nothing,
Full often may cheer.
Each day of our lives
Some treasure would add,
To be conscious that we
Have made somebody glad.

Those who sit in the darkness
Of sorrow, so drear,
Have need of a trifle
Of solace and cheer.
There are homes that are desolate,
Hearts that are sad;
Do something for someone—
Make somebody glad.

A GOOD VOICE.

THE gift of one good voice, clear enunciation, correct pronunciation, in every family, would raise the enjoyment of home life fifty per cent, if such valuation could be placed on so spiritual a family possession; the gain that would result in the increase of general intelligence to each family is incalculable. It seems a great pity that when so much money is spent on accomplishments that really minister to the student's development only, more attention is not given to the very desirable accomplishment of elocution—not that the student may recite in public, but that he or she may read in private for the common development of the intelligence of the family. The art of elocution has its true value in conversation. How often bad inflection, wrong emphasis, completely hides, if it does not pervert, the speaker's meaning. Elocution is not a superficial training, a mere effort at effect; it is a training of the perceptions, of intelligence; it is the effort to bring always the true meaning by a clear understanding of what was meant by the declaration, the sentiment. No longer is elocution a training of one sense—that of speech; it recognizes that gesture must bear its relation to the thing said; it recognizes that perfect harmony depends on perfect health, and applies methods of training necessary to physical development. "We cannot wear corsets, or high-heeled shoes, or heavy skirts while taking our lessons," writes one bright girl to another, who was making arrangements to take lessons with her from a teacher in elocution. It is this recognition of the dependence of the mental on the physical condition that makes elocution so valuable a part of the mental training. And the healthy sentiment which prevails, that it is no longer an accomplishment for the platform only, but for the home, for society, for the increasing of individual grace and power, makes it as much a part of every well-educated individual as a knowledge of literature, art or science.

WHAT IT WOULD DO.

The money paid for one glass of beer would pay for one loaf of bread.
The money paid for one glass of whisky would pay for one pound of beef.
The money paid for two glasses of beer would pay for a peck of potatoes.
The money paid for two glasses of whisky would pay for one pound of coffee.
The money paid for three glasses of beer would pay for a quarter of a pound of tea.
The money paid for three glasses of whisky would pay for a dressed fowl.
The money paid for four glasses of beer would pay for two dozen of eggs.
The money paid for four glasses of whisky would pay for three pounds of butter.
The money paid in one month for two glasses of beer a day would pay for a ton of coal.

The money paid in one month for two glasses of whisky a day would pay for a suit of clothes.

The money paid in one year for three glasses of beer a day would pay the rent for a small suite of rooms for one year.

The money paid in one year for three glasses of whisky a day would pay for an outfit of household furniture.

The money paid in one year for four glasses of beer a day would pay for a carriage.

The money paid in one year for four glasses of whisky a day would pay for a horse and harness.—*Wooster Herald.*

NOTHING IN THE PSYCHICAL QUEST.

The *Boston Transcript* has information that next week at the annual meeting of the American Society for Psychical Research, the discontinuance of that organization will be considered. It is not proposed to abandon psychical research altogether, but to merge the organization into the British society of the same name, as a branch of the latter.

This would be a gentle way of confessing that there is nothing in the psychical hunt. If there had been any result of importance during the two or three years of the American society's fresh enthusiasm, or even any reasonable promise of important results later on, the interest would now be on the jump, instead of on the tumble.

The researches of the British society have been scarcely more productive. The printed literature of that association is voluminous, but not very rewarding. The reports submitted from time to time by its many committees, and the monographs presented by the more active and persistent investigators among its members, contain a great deal of interesting matter, but precious little that is really useful to science.

The quest has found nothing, because there is nothing to find. It has accumulated a number of ghost stories, tales of warning by dream or by telepathy, marvelous coincidences and surprising events of various sorts. It has not established a single case of apparition or of telepathic communication. If it had established one ghost or one telepathic message, by evidence which science could accept, the work would be done. One ghost proves the case.—*New York Sun.*

A PURE RELIGION.

A religion with no Christ in it as a personal savior from all sin, is not worthy the name of religion.

A religion which does not purport a holy heart and life and which does not set forth or show a power sufficient to enable one to practice its precepts, is not the true religion.

A religion which does not afford strength and relief under affliction, joy in sorrow, help in time of need, deliverance in time of temptation, and satisfy the longing of the human heart, is not the religion of the Bible.

A religion which we cannot freely and safely recommend to everybody, and which will not fit every case, is not the religion of our Lord Jesus Christ.

A religion which we do not enjoy, but which brings us into bondage and only makes us miserable, is not better than no religion.

A religion in which we are not kept unspotted from the world and enabled to show a consistent and unselfish life, is not the pure and undefiled religion.

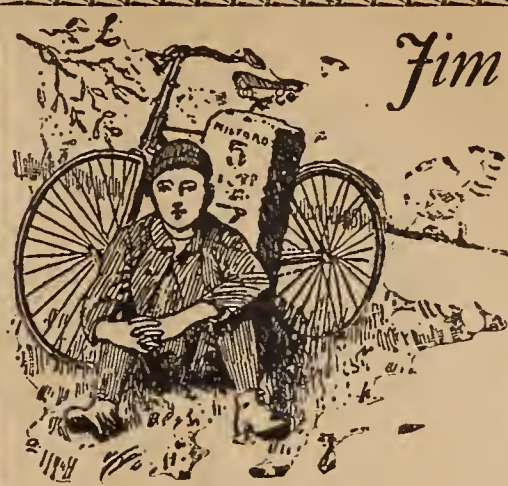
Anyone who practically embraces the religion of our Lord Jesus Christ will have no use for any of the new-fangled religions of to-day, for "the old-time religion" satisfies in every respect. Anyone who claims to have the religion of our Lord Jesus Christ and is not saved and kept from sinning and does not find happiness and satisfaction in it, is either a hypocrite or greatly deceived.—*Times of Rejoicing.*



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One of them has no dirt-pocket; doesn't need any.

Eleven are hard to learn and hard to care for—Who will take care of them?

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The one is the "Pittsburgh." Send for a primer.

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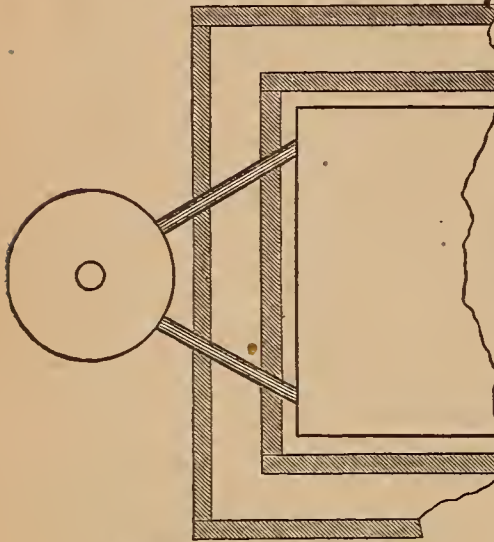
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Conducted by P. H. Jacobs, Hammonton, New Jersey.

FEEDING IN SPRING.

It must not be overlooked that it will not answer to feed hens as heavily now as during the winter. Quite a number of our readers complain that their hens are in excellent condition, apparently healthy and well fed, but they do not lay. The fault is probably due to the "well-fed" system. Some suppose that if a certain proportion of food is eaten, the hens are sure to lay, and if the hens do not lay,



TOP VIEW OF BOILER AND TANK.

they increase the food. As the hens have nothing to do but eat, they easily and quickly fatten, and though in the best possible condition, to all appearances, are more fit for market than for egg production.

There is another point to be observed; and that is, when the winter is over, less food is required for the support of the hen. She needs less warmth, and consequently less food. No doubt if some would adopt the plan of reducing the food one half,

side measure; inside, 2 inches smaller; that is, there is a space of 2 inches between the two boxes all around, except in front. There is an upper ventilator and a lower one, with tubes for fresh air in the bottom. The machine is 30 inches high from floor of room to top of incubator.

"The tank is of galvanized iron, 18½ inches long, 13 inches wide and 1½ inches deep, with two pipes at the left-hand side to connect with the boiler, one a little lower than the other, and spreading off at right angles to the tank.

"The boiler is of iron, 6x6 inches, with ¾-inch pipes and connections. The hood (globe) under boiler is 4 inches high and 3 inches in diameter at the base. The burner is a regular burner, and should burn without a chimney.

"The egg-tray has rollers on the bottom, which makes the turning of the eggs very easy.

"The cost of this incubator should not exceed \$6, and the cost of operating is about three cents a day. The greatest expense is the tank and boiler. My lumber cost very little, as I used boxes. There is no regulator. If kept out of the draught this incubator will work like a charm.

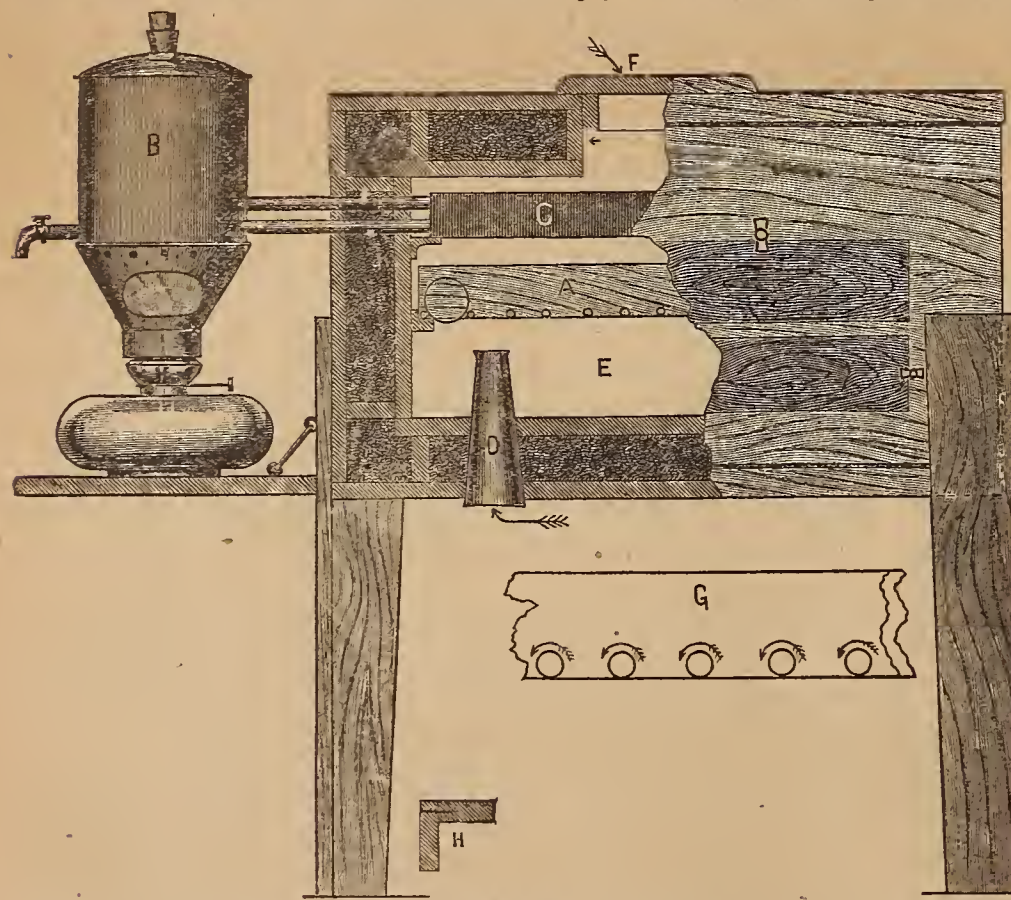
"In operating it the heat is kept at 103 degrees, the bulb of the thermometer resting on an egg. I kept two pans of water in mine all the time, under the egg-drawer, and also a wet sponge or two in the egg-drawer, but when hatching, add more sponges and keep the drawer shut. The machine illustrated here explains itself without any extended description being necessary.

CORRESPONDENCE.

FEEDING FOR EGGS.—In looking over your paper, I notice "S. F. S.'s" success with poultry. He has made a large profit from a few hens. Now, will he please state his manner of feeding for eggs? Last spring I had thirty-five hens, and they laid well all summer. When we dressed our poultry in November we saved forty pullets more, and we have fed those seventy-five hens all winter and they have failed to put one egg in the nest or anywhere else. They have been fed on corn, buckwheat, wheat bran and corn meal, mixed and fed to them warm. Will some of the readers of this good paper please tell me how to feed for eggs? Fairdale, Pa. O. E. S.

[You have overfed your hens, and they are too fat.—ED.]

BENEFITS DERIVED.—I received, yesterday, my first number of FARM AND FIRESIDE. That single issue, in an article on page 161, more than pays for a year's subscription. The



HOME-MADE INCUBATOR.

A egg drawer, B boiler, C tank, D lower ventilator, E warm air space, F upper ventilator, G section showing rollers in egg-drawer, H end view of leg.

the hens would soon begin to lay. Feed liberally is a rule taught by many; but to feed liberally requires judgment. One must know his hens and just what each individual requires.

A CHEAP, HOME-MADE INCUBATOR.

Mr. W. C. MacGeorge sends a design of his incubator, which the readers of this journal may use, there being no patent on it. In describing it he says:

"This incubator may be made on a larger or smaller scale, as preferred. For the experiment I simply took a rough box, 20 inches long, 15 inches wide and 17 inches high, but I would advise that it be made double, with sawdust packing. The following is better: Length of box 26 inches, width 20 inches, height 15½ inches—out-

article I refer to is entitled "Mating Fowls for Breeding." I have a brood of chickens, four days old, whose parents are less than a year old, and but for that article I could not have imagined what ailed them. I think I shall have to kill about half of them to put them out of their misery. The other half seem to be all right, and are doing well. Norwalk, Ohio. J. J. K.

INQUIRIES ANSWERED.

Lime for Preserving Eggs.—H. L., Linden, N. Y., writes: "Please give the proportions of lime and water required to pickle eggs. Will the yolks of eggs thus treated settle to one side if not turned?"

REPLY:—The process consists of making a strong solution of freshly-slacked lime and adding one pint of salt to two gallons of water. We do not recommend any lime method. The eggs will have the yolks adhered to the sides if the eggs remain in one position. To properly preserve eggs, simply keep them on racks, in a cool place, and turn them twice a week. Use

WE WANT A NAME FOR THIS NEW TOMATO

UNTIL a suitable name is suggested we shall call this Tomato No. 400. Read terms of competition below.

The No. "400" is the largest and heaviest Tomato known. In fact it is so solid as to be almost seedless. Color, rich, dark, crimson.

AND WILL PAY \$250.00 FOR IT

The average weight of this Tomato is nearly 2 lbs. each.

WE WILL PAY \$250.00 IN CASH

For the best name suggested for this New Tomato. Purchasers are entitled to send in a name for each and every packet they buy. The names can be sent in any time before October 1st, 1891, and will be considered by a disinterested committee of three, who shall award the prize. Full directions for entering the names for competition given on every packet of seed.

Price of New Tomato No. "400," 25 cts. per packet, free by mail.

With every order for a packet or more, we will also send free our magnificent New Catalogue of "EVERYTHING FOR THE GARDEN" for 1891. (the value alone of which is 25 cts.), on condition that you will state where you saw this advertisement.

PETER HENDERSON & CO. NEW YORK

eggs from hens not with males. You will not succeed if you buy the eggs wherever they can be procured.

Sulphur and Oyster Shells.—C. T. P., Lakeville, N. Y., writes: "1. In what shape should sulphur be fed poultry, and how often do they require it? 2. Should crushed oyster shells be fed to fowls when they have the run of a barn-yard?"

REPLY:—1. We do not advise the feeding of sulphur to poultry in any form. It is of no benefit, and often does harm. 2. If the fowls can find plenty of gritty food, they will need no shells.

White Guineas.—P. Z., Macon City, Mo., writes: "Are the so-called white guineas entirely white, or only of a pale color?"

REPLY:—They are entirely a clear white.

Incubator Plans.—E. H. P., Calhoun, writes: "Will you please inform me where to get incubator plans? Answer by mail."

REPLY:—If the writer will give his state, as well as post-office (there are thirteen Calhouns), the plans will be sent.

Enlarged Liver.—G. B. B., Mill Creek, Utah, writes: "Is enlargement of the liver a disease, or simply an abnormal growth? I had a hen whose liver was as large as my hand and ulcerated."

REPLY:—It is a disease due to lack of exercise and overfeeding, and occurs mostly with fat fowls.

How Much to Feed.—F. O. Harman, Madisonville, Ohio, writes: "I feed mostly whole corn, together with scraps from the table. How much should I feed twenty-five hens?"

REPLY:—As no two hens are alike, and as a laying hen needs more than one not laying, the question cannot easily be answered. We have given several articles on the subject. It is estimated that a quart of corn a day is sufficient for a dozen hens; but just how to measure the proportion of table scraps, corn, wheat and green food, is a matter of observation. The question is equivalent to asking how much dinner should be cooked for a family of one dozen. Some will eat one thing and some another, while some will eat with relish and others not.

Feather Pulling.—Mrs. S. D., New Brighton, Pa., writes: "What will prevent hens from picking the rooster?"

REPLY:—It is a habit, usually the result of idleness and confinement. The only remedy is to separate the hens. As the habit cannot be cured, except with difficulty, most persons destroy the flock and procure others.

THE income derived by French people who rear fowls, according to official returns, is 337,100,000 francs, of which 153,500,000 francs represents the value of the flesh and 183,000,000 francs that of the eggs.

FOR A DISORDERED LIVER TRY BEECHAM'S PILLS.

BEE-KEEPERS ATTENTION!—If you are in want of Bees or Bee-Keepers' Supplies send to the largest factory in the east. Goods at lowest prices. Send for Illustrated Catalogue. OLIVER HOOVER & CO., RIVERSIDE, PA.

EGGS \$1 per setting, 14 varieties. Write for circular now. Ohio Poultry Yards, Sherwood, Ohio.

EGGS \$1.50 per 13 from 5 varieties pure bred fowls. S. J. FOSTER, Sharpsburg, Pa.

EGGS FOR SALE CHEAP from 30 varieties of choice stock. Send stamp for 24 page catalogue. J. S. SHOMAKER, Dakota, Ill.

EGGS and FOWLS FOR SALE From 50 Varieties. Largest and Best Range in the West. My fowls won over 600 first and 2nd prizes at 7 State shows last fall. For full description send three one-cent stamps and get the finest illustrated catalogue out, 8x11, 32 pages. CHAS. GAMMERDINGER, COLUMBUS, O.

Prize barred and White Plymouth Rocks, Silver and White Wyandottes and Pekin Ducks. Eggs and Fowls For sale. Catalogue Free.

A. C. Hawkins

Box 91, Lancaster, Mass.

INCUBATORS. Bates' Egyptian Incubators. Send for circulars. JOSEPH I. BATES, Weymouth, Mass.

IMPROVED INCUBATOR EXCELSIOR Simple, Perfect and Self-Regulating. Hundreds in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other hatcher. Send 6c. for Illus. Catalogue. Circulars free. GEO. H. STAHL, QUINCY, ILL.

POULTRY for PROFIT. We will send for 25 cts., or 15 cts. if you mention this paper, FARM & POULTRY, a 20 page magazine, six months. Sample copy free. I. S. JOHNSON & Co., Boston, Mass.

PRINTING For Poultry and Stock Fanciers, Beekeepers, Nurserymen, Florists, Dairymen, Fruit Growers, Farmers, etc., a specialty. We have a large line of electrotype cuts for illustrating your work. Samples free. Cuts for sale. Envelopes, letterheads, cards, and tags from 40 cts. per 100 and up. DePuy's Electric Printing Works, Syracuse, N. Y.

AMERICAN STANDARD POULTRY BOOK! \$10.00 FOR 25 Cts. A large profusely illustrated Book of 128 pages, containing more than Ten Dollars' worth of valuable information to poultry raisers, will be sent by return mail, post-paid, for only 25c., including the Household Prior 6 months on trial, a large 8 page, 40 column illustrated household paper, one of the best in America. We make this great offer to introduce our paper into new homes. Address, Pilot Publishing Co., New Haven, Conn.

BOAT EXTENDED & FOLDED Send for our Illustrated Catalogue of Folding Boats and Canoes. ACME FOLDING BOAT CO. Miamisburg, O.

HOW TO BUILD HOUSES. NEW work just published. Contains FORTY PLANS of Houses, Churches and Barns with COMPLETE SPECIFICATIONS. All new designs of artistic and economical homes for country village and city. With this book you can build without the services of an architect and thus SAVE MANY DOLLARS. Sent postpaid anywhere for ONLY 25 CENTS. LAIRD & LEE, Publishers, 263 Wabash Ave., Chicago, Ill.

Auburn, N. Y., March 11, 1891. Having received the Peerless Atlas of the World in good order, I must say it is the best Atlas I have ever seen for the price, and think it a remarkable book for the amount of information it contains, being worth as much as any \$5.00 or \$8.00 Atlas I have ever met with.

SAMUEL S. BROWN,

Our Miscellany.

THE Romans etched their public records on brass.

THE Chinese do not permit their women to be photographed.

THE first theatre in the United States was at Williamsburg, Va., in 1752.

FLORISTS are said to add perfume to flowers by dipping them in some fragrant essence.

A CIRCASSIAN mother's first care is to promote the growth of her children's eyelashes.

IT is estimated that bad roads have depreciated Illinois farms in value over \$160,000,000.

THERE are about 32,000 arrests each year in Paris, and of those arrests thirty-five are assassins.

A PETRIFIED man, seven feet long and weighing six hundred pounds, has been discovered in a Colorado canyon.

NO wonder the boys are deserting the farms when a good, industrious hand can make \$3,500 a season as a base ball pitcher.

THERE are five women and one man living at 162 Amherst street, Toronto, Can., who sleep every night in their respective coffins.

THE population of New England has increased nearly half a million in the last ten years. But the farming population has decreased.

FOR stings or bites from any kind of insect, apply dampened salt, bound tightly over the spot. It will relieve, and usually cure very quickly.

SALT as a tooth-powder is better than almost any other dentifrice. It keeps the teeth very white, the gums hard and rosy and the breath fresh.

THE fifty largest libraries in Germany possess about 12,700,000 volumes, against England with about 6,450,000 and North America with about 6,100,000 volumes.

FOR neuralgia make a small muslin bag, fill it with salt, heat it very hot, and lay it against the aching place. It will prove a great relief, as salt retains the heat a long time.

IF the throat is very sore, wring a cloth out of cold salt and water, and bind it on the throat tightly when going to bed; cover it with a dry towel. This is excellent.

A PHILADELPHIA clergyman has been driven from his pulpit because he frequented "fast" resorts. He should have known that nothing is tolerated in Philadelphia unless it is slow.

HERE is California's crop for the year: Grain, 44,000,000 bushels; wine, 18,000,000 gallons; raisins, 2,341,000 boxes; dried fruit, 525,000 tons; fresh fruit, 52,000 tons; Lima beans, 50,000 tons.

THE New South Wales minister for mines declares that, excluding the quantities obtainable from the Clarence River District, the colony had over 80,000,000,000 tons of coal available.

THE sun gives 600,000 times as much light as the full moon; 7,000,000,000 times as much as the brightest star in the sky, and 36,000,000 times as much as all the stars in the heavens combined.

WE will mail free to any address a copy of our Home Treatment, a positive cure for all complaints, and weaknesses peculiar to females. Send self-addressed stamped envelope. Mayflower Med. Co., 85 LaSalle St., Chicago, Ill.

ACCORDING to figures given by a San Francisco newspaper, California is the bloodiest state in the union. In 1889 it had one homicide to 3,479 of the population. It runs up from one in 8,912 in Kentucky to one in 80,000 in other states.

JUDGE LEPPER once owned one hundred and sixty acres of land adjoining Pierre, the new capital of South Dakota, and thought he had struck it rich when he sold out for \$3,000. To-day, at the ruling prices, his quarter section is worth over \$250,000.

IN Hindostan the konds have for ages allowed their hair to grow to a great length, which they twist around and around their heads and fasten into a knot in front, in which they carry a few cigars made of tobacco rolled in a green leaf.

THE conclusions reached by modern meteorologists are that cyclones of great intensity are ascending, spiral whirls of wind having a rotary motion in a direction in the northern hemisphere opposite to the movement of the hands of a watch.

MINERAL oils were exported from the United States in July, 1889, to the amount of \$1,600,000, as against \$1,143,042, in July, 1888. For the seven months ending July 31, 1889, the amount was \$23,187,433, against \$25,872,554 in the same period of last year.

OCCASIONALLY the return of the swallow or the nightingale may be somewhat delayed, but most sea fowls may be trusted, it is said, as the almanac itself. Were they satellites revolving around this earth their arrival could hardly be more surely calculated by an astronomer.

THE IRRITATING WORRY of a Constant Cough may be avoided, and much wear and tear of the Lungs and Throat cured by using that safe and old established remedy, Dr. D. Jayne's Expectorant, which will help you in all cases of Coughs and Colds, and in Affections of the Throat and Lungs.

A WEST SENECA (N. Y.) woman has for the last few years supported herself from the earnings of a 17-acre flower farm. Her income is at times as much as \$2,000 a year. She recommends floriculture as a good business for women, and the wild West as the best field to begin in.

THE Ural mountains in Russia were anciently the subject of various myths. The Slavonians who, in the eleventh century frequently visited the region of the Urals for trade, described them as mountains reaching the sky, intersected by terrible precipices, and as being inhabited by a population of cave dwellers.

IT has been estimated that the volume of water poured into the Rio de la Plata, Brazil, exceeds the aggregate discharge of all the rivers of Europe put together. Its ordinary flow at some points is 100,000 cubic feet per second. The ordinary volume of water in the Uruguay river averages 11,000,000 of cubic feet per minute.

MADAME Helena Modjeska, who is still a very "Rose of May" upon the stage, and who is known as the gentlest and kindest of artists, is quoted as saying that ill-temper, with its excitement of the nerves and disturbance of the emotions, is a deadly foe to beauty and charm, and that no wise woman will permit herself its indulgence.

DO not stint your horse in the use of salt, is the *Sporting World's* advice to horse owners. Horses, as a rule, do not get half enough salt. It is a great thing for the promotion of health. Horses crave salt, but thousands never get it on account of their masters' ignorance or carelessness. They will lick whitewashed walls for the sake of a little salt in the lime.

MANY animals refuse food and loose appetite simply for the lack of a little salt to give the food a pleasant taste. Animals will reject tasteless food as well as humans. Salt is essential to digestion and it should be provided. There need be no fear of giving too much salt if the food is slightly seasoned with it. A small quantity of salt and water sprinkled over the hay or added to the mash will induce the animals to relish it.

THE champion meanest man and the most heartless justice live in Sturgis, S. D. The meanest man lost his pocketbook, containing \$250; and when the finder returned it to him, after a month spent in discovering the owner, he demanded that the finder pay him interest for the use of the money. Naturally, the finder refused this unreasonable demand, whereupon the meanest man brought suit for the interest, and the most heartless justice gave the meanest man judgment for \$1.45 and costs.

MARVELOUS ENDURANCE.

THE vast amount of work performed by the heart in keeping all portions of the body supplied with blood is not generally known. It beats 100,000 times, and forces the blood at the rate of 168 miles a day, which is 3,000,000,000 times, and 5,150,880 miles in a lifetime.

LONGEST STRAIGHT ROAD ON EARTH.

THE New Argentine Pacific railroad, from Buenos Ayres to the foot of the Andes, has on it what is probably the longest tangent in the world. This is 340 kilometres (211 miles) without a curve. In this distance there is not a single bridge and no opening larger than an ordinary culvert.

THE FAME OF INTELLECT.

Mrs. Lionchaser (giving a five o'clock tea)—"Come, I want to introduce you to Professor Knowall, of England, who is delivering that fine course of lectures before the Institute, you know."

Mrs. Giddy—"Yes, but before you take me up tell me what he lectures on, so I can talk to him."

Mrs. Lionchaser—"Bless me! Don't you know what he lectures on? Why, I thought everybody knew that."

Mrs. Giddy—"Well, I don't."

Mrs. Lionchaser—"He lectures on—he lectures on—why, he lectures on the platform, of course. Come on."—*Boston Courier*.

IMMIGRATION.

THE statistics of immigration for 1890 are now complete. The following official table shows the number of emigrants from all countries, except Canada and Mexico, for the years 1889 and 1890:

| | 1890. | 1889. |
|----------------------------------|---------|---------|
| Bohemia..... | 7,786 | 2,654 |
| Hungary..... | 24,994 | 15,743 |
| Other Austria (except Poland)... | 30,315 | 23,773 |
| Denmark..... | 9,684 | 8,594 |
| France..... | 96,482 | 6,117 |
| Germany..... | 55,859 | 95,935 |
| England and Wales..... | 11,396 | 62,500 |
| Scotland..... | 53,312 | 14,939 |
| Ireland..... | 62,492 | 60,375 |
| Italy..... | 4,414 | 29,606 |
| Netherlands..... | 19,737 | 6,339 |
| Poland..... | 40,883 | 4,866 |
| Russia (except Poland)..... | 43,197 | 33,474 |
| Sweden and Norway..... | 6,791 | 42,419 |
| Switzerland..... | 16,731 | 7,356 |
| All other countries..... | 491,026 | 426,712 |

Of the immigrants arriving in this country during 1890, 398,396 were landed in New York, 30,971 in Boston, 29,125 in Baltimore, 23,434 in Philadelphia, 4,800 in San Francisco, and 4,300 in New Orleans.

NATURE'S SPECIFIC The Wonderful Kola Plant; FOR THE CURE OF ASTHMA FREE ON TRIAL.

Discovered by African Explorers on the banks of the Congo river, West Africa, is a certain and unfailing cure for Every Form of ASTHMA. A Positive Cure Guaranteed, or if you desire it, NO PAY UNTIL CURED. Office for Export and Wholesale Trade, 1164 Broadway, New York. For Descriptive Book and Trial Case of The KOLA Plant Compound, (HIMALYA), FREE by Mail, address Central Office, KOLA IMPORTING COMPANY, 132 VINE STREET, CINCINNATI, OHIO.

See New York World, May 18, 1890; Philadelphia Press, May 19; Christian Observer and Medical Journal, April 9; etc., for full accounts of this wonderful botanical discovery. The Christian Evangelist, May 30, 1890, says editorially: "If no other result than the discovery of the Kola plant followed the explorations of Stanley and associates, surely their labors were not in vain. We have the most convincing proof that it is a certain and unfailing cure for Asthma in all its forms, and is the most valuable medical discovery of this century." Remember, NO PAY UNTIL CURED.

A WELL-WIRED WORLD.

The length of telegraph lines of the world, at the end of 1889, had reached a total of 1,680,900 miles, sufficient to go around the equator seventy times.

A HEROIC REMEDY.

"You have taken a severe cold," said the old family doctor, "and it seems to have settled in your throat."

"Yes, doctor, you see I can hardly speak," said the patient, a vivacious, bright-eyed young woman.

"Can you stand heroic treatment, do you think?" asked the doctor.

"Try me."

"Are you sure?"

"Yes, anything you like; medicine, mustard plasters, electricity, anything!" she said in a breath.

"And you want to get back your voice?"

"Yes!"

"It's heroic treatment, mind you."

"All right—what is it?"

"You mustn't talk at all for two days."—*Pittsburg Dispatch*.

Recent Publications.

EXPERIMENT STATION BULLETINS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

ALABAMA.—(Canebrake Station, Uniontown) Bulletin No. 10, December, 1890. Corn. Meteorology. Soil temperatures.

ARIZONA.—(Tucson) Bulletin No. 1, December 1, 1890. General announcement and plan of work.

AUSTRALIA.—(Brisbane, Queensland) Bulletin No. 5, November, 1890. Canning and otherwise preserving fruits for the home and market.

CALIFORNIA.—(Berkeley) Bulletin No. 90. Fibre plants for California. The production of ramie.

CANADA.—(Central Experiment Farm, Ottawa) Bulletin No. 8, January, 1891. Results of early and late seeding of barley, oats and spring wheat.

CANADA.—(Agricultural College Experiment Station, Guelph) Bulletin No. 43. Spring grains in 1890.

FLORIDA.—(Lake City) Bulletin No. 12, January, 1891. Tobacco, rice, cotton, sorghum. Ashes as a fertilizer.

GEORGIA.—(Experiment P. O.) Third annual report. Bulletin No. 11, January, 1891. Fertilizer experiments. Culture experiments and variety tests in cotton, sweet potatoes, field peas, garden vegetables, etc.

KANSAS.—(Manhattan) Bulletin No. 14, December, 1890. Winter protection of peach trees, and notes on grapes.

KENTUCKY.—(Lexington) Bulletin No. 31, December, 1890. Some strawberry pests.

LOUISIANA.—(Baton Rouge) Third annual report. Bulletin No. 5. Sugar making on a small scale, with results at the North Louisiana Experiment Station, at Calhoun, La. Bulletin No. 6. Results of field experiments with sugar cane at the Sugar Experiment Station, at Audubon Park, New Orleans, La.

MAINE.—(Orono) Annual report for 1889 and 1890.

MASSACHUSETTS.—(Hatch Station, Amherst) Bulletin No. 11, January, 1891. Reports on strength of rennet, hay caps, Flandres oats, prevention of potato rot, fungicides and insects on fruits.

MICHIGAN.—(Agricultural College P. O.) Bulletin No. 70, January, 1891. Vegetables, varieties and methods.

MINNESOTA.—(St. Anthony Park) Bulletin No. 13, December, 1890. A treatise on flax culture. Bulletin No. 14, January, 1891. Swine feeding for profit. Swine breeding. Sugar beets—their cultivation, the process of manufacture, etc.

NEW JERSEY.—(New Brunswick) Third annual report. Bulletin No. 78, January, 1891. Destroy the black knot of plum and cherry trees. An appeal.

NEW YORK.—(Cornell Station, Ithaca) Bulletin No. 24, December, 1890. The clover rust. Bulletin No. 25, December, 1890. Sundry investigations made during the year. Annual report for 1890.

OREGON.—(Corvallis) Bulletin No. 7, October, 1890. Comparative tests of small fruits and vegetables.

OHIO.—(Columbus) Bulletin No. 10, Volume III. Preventing downy mildew or brown rot of grapes. The smut of Indian corn.

PENNSYLVANIA.—(State College P. O.) Bulletin No. 13, October, 1890. Black knot on plums. A few ornamental plants. Bulletin No. 14, January, 1891. Tests of varieties of vegetables for 1890.

BROWN'S FRENCH DRESSING



FOR LADIES' AND CHILDREN'S BOOTS AND SHOES.

Awarded highest honors at Philadelphia.....1876 Melbourne.....1880 Berlin.....1877 Frankfurt.....1881 Paris.....1878 Amsterdam.....1883 And wherever else exhibited.

\$525 IN GOLD IF YOU TELL THIS REBUS.



The Household Companion will give \$200 Cash to the 1st person sending a correct solution to the above Rebus. To the 2d, \$100; to the 3d, \$50; to the 4th, a first-class Safety Bicycle, or if a lady an elegant diamond ring. To each of the next 10, a SOLID GOLD WATCH. To the next 15, a Beautiful Silk Dress Pattern. To the next 25 a Nickel or Gold-Plated Watch; to each of the next 50 a valuable Business or House Lot. The above Rebus makes two words. Answers must reach us on or before June 1, 1891. With your answer send 25c. postal note or 30c. in stamps for a subscription to our Illustrated 16pp. Paper, worth a dollar a year. Our June issue will announce the result of the contest, with names and addresses of the winners. We have given away over \$20,000 in prizes and premiums to our subscribers in the past two years and now have over 100,000 Circulation. Write your answer and name and address plainly, and enclose subscription money to

HOUSEHOLD COMPANION, 119 Nassau St., New York City.

Mention this paper when you write.

FALSE MUSTACHE and circulars, 10c. (silver). J. E. GILLSON, 764 10th St., Des Moines, Iowa.

BLUEING for a year, or ink for a lifetime. Send 10c. silver. C.R. Russell, Waterbury, Conn.

Silk Satin & Plush Remnants for Crazy Patch, a large pkg. pretty pieces, assorted col. 10 cts. 12 pks. \$1 LADIES' ART CO. Box 584, ST. LOUIS.

SELL MUSIC

We will pay a liberal Salary to Agents who will take subscribers and receive sample copy with five complete pieces of latest vocal and instrumental music. Address WOODWARD'S MUSICAL MONTHLY, 842 Broadway, N.Y. Mention this paper when you write.

SOUTH DAKOTA.—(Brookings) Bulletin No. 19, December, 1890. The sugar beet. Third annual report for 1890. Bulletin No. 20, January, 1891. Forestry.

TENNESSEE.—(Knoxville) Bulletin No. 6, Vol. IV. Index to Vols. I, II, and III. Bulletin No. 1, Vol. IV., January, 1891. Crab grass hay. Sorghum as a forage plant. Test of feed value of first and second crop of clover. Pasture grasses. Black knot of the plum and cherry. Pruning fruit trees. The glassy-winged soldier bug. Diseases of live-stock. Experiment Station Record.

TEXAS.—(College Station) Bulletin No. 13, December, 1890. Sorghum: Value as feed stuff. Effect on soil. Teosinte: Analysis at different stages of growth. Third annual report for 1890.

UTAH.—(Logan) First annual report for 1890. Bulletin No. 3, January, 1891. Experiments with garden vegetables. Bulletin No. 4. Dynamomatic tests with wagons.

VIRGINIA.—(Blacksburg) Annual report, 1889-90.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 820 Powers' Block, Rochester, N.Y.

Smiles.

SILENCE AM DE GOLDENEST.

'It doan pay to do much talkin' w'en you' mad enuff' to choke,
'Kase de word dat stings de deepes' am de one dat's neber spoke;
Let the other fellow wrangle till de storm am blowed away,
Den he'll do a pile ob thinkin' 'bout de things you didn't say."

—Puck.

SURE OF HIS WIFE.

POOH!" said one man in the horse-car, as a group of business men were on their way down town, "my wife is the most methodical, careful, neat woman you ever saw. It is all nonsense for a woman to let a house run into disorderly ways. You ought to see how my wife does things."

"Well, of course that is all very well in theory," responded another, "but the best housekeeper gets behind, or something, sometimes."

"My wife never does. She is always the same. She keeps everything in first-class shape."

"She must be a remarkable person," said another man. "How long have you been married?"

"Ten years. And she never disappointed me. Why, gentlemen, she always puts everything in the same place and you know just where to find what you are after. For instance, I went to my handkerchief drawer this morning before daylight and took out a handkerchief and put it in my pocket before starting out, and I know just as well as I know my own name that that handkerchief is just such a size and has my initials worked in silk in this corner."

And the boastful man put his hand in his pocket and pulled out—and unfolded—a white night-cap, with long strings dangling from it.

THE MARRIED MAN.

A married man always carries his condition with him, like a trade mark. Anybody of average discernment can detect him at a glance. He does not pinch his toes with tight boots. He does not scent himself with violets. He never parts his hair in the middle. He keeps his seat in the horse-car when the pretty girl, laden with bundles, comes in; he knows that his wife wouldn't approve of his rising. He does not get up flirtations with the good-looking saleswoman where he buys his gloves; he remembers that little birds are flying all around telling tales, and he has a horror of curtain lectures; somehow, married men never seem to arrive at that state of beatitude where they do appreciate the kind of literary performances known as curtain lectures.

The married man has come to that stage when he is convinced that the way his necktie hangs may not be any more important than his soul's salvation. He knows to a certainty that true happiness does not depend on the amount of starch in his shirt-bosom, but he will have to have been at least three times wedded before he will be able to be reconciled to a collar-band two sizes small or one size large. The man who can smile at fate when it swoops down upon him in the shape of an ill-fitting collar-band is nearly ready for canonization.—*New York Weekly*.

A QUEEN'S DILEMMA.

A sojourner in England thus writes about the impossibility of the queen visiting a gallery to get her photograph taken:

"Imagine the queen going up two pairs of narrow stairs in quest of a photograph gallery with four and twenty noblemen in advance and half a dozen knights in advance of them, and fourteen squires ahead of the knights; and then back of her twelve waiting women with skirts four yards long, with four bishops back of them; the lord mayor back of the bishops; all the foreign ambassadors back of the lord mayor; a couple of scores of diplomats and soldiers back of the ambassadors; a large assortment of knights and lords back of them, and the high sheriff of London bringing up the rear in red cloth and gold lace. What photographer could stand that?"—*Dry Goods Chronicle*.

A CORDIAL RECEPTION.

One Sunday, during high mass at twelve, in the chapel of the little village of Glengariff, three ladies of the Protestant faith were obliged to take shelter from one of those heavy summer showers which so frequently occur in the south of Ireland. The officiating priest, knowing who they were and wishing to appear respectful to them, stooped down to his attendant, or clerk, who was on his knees, and whispered to him: "Three chairs for the Protestant ladies." The clerk, being an ignorant man, mistook the words, stood up and shouted to the congregation: "Three cheers for the Protestant ladies!" which the congregation immediately took up and gave three hearty cheers, while the clergyman actually stood dumbfounded.

HAVE YOU CATARRH?

There is one remedy you can try without danger of humbug. Send to H. G. Colman, Chemist, Kalamazoo, Mich., for trial package of his Catarrh Cure. His only mode of advertising is by giving it away. Postage 4 cents. Judge for yourself. Mention this paper.

JUST INDIGNATION.

Every right-minded woman resents any reflection on her bonnet. Here is an illustration in a story from open-car time:

A director of a horse railroad line was riding on the car when a woman near him was robbed of her bonnet by a gust of wind. Off jumped the woman after her bonnet without waiting for the car to stop, while the director sat helpless and angry with visions of a suit for injuries from the relatives of the bare-headed woman dancing through his own head.

But back she came unhurt with the rescued bonnet on her head and got upon the car, which had now stopped for her.

"That's right," said the director. "That's right; risk your life for a \$2 bonnet."

The woman's eyes flashed fire and she retorted, sharply:

"Tain't a \$2 bonnet; it's a \$7 bonnet."—*Boston Transcript*.

IT DID THE BUSINESS.

Well-dressed stranger—"Madame, in the upper left-hand pocket of a vest that you gave to a miserable tramp a few months ago, there was a cigar belonging to your husband. I have—"

Lady of the house—"Why, is this the same man? What a great change."

Stranger—"Yes, a rich uncle died suddenly and left me all his wealth. As I was about to say, I have to thank your husband."

Lady of the house—"Why, what for?"

Stranger—"For the cigar. I gave it to my uncle."—*Clothier and Furnisher*.

NOTHING TO WORK ON.

"Got anything you want sharpened, gents?" inquired the aged peddler with the razor paste.

"Yes," replied the smart youth at the desk near the door. "You can sharpen our wits if you want to, old man."

"Got to have something to work on, gents," the old man said, as he looked around the room, shook his head pityingly and walked away.—*Chicago Tribune*.

MARRIAGE ETIQUETTE IN TEXAS.

Westerly—"Did you read about the Texas girl whose fiancé did not appear in church at the time appointed?"

Brown—"No. What did she do?"

Westerly—"She borrowed the minister's revolver and asked him to wait a few minutes. Within half an hour she came back with a placid smile and a submissive bridegroom."

NOT EMBARRASSED.

"Doesn't it embarrass you to be kissed by your husband before a car full of people?"

"Embarrass me?" replied the lady, who was starting off on a journey, as she seated herself and looked at the questioner. "Did John kiss me when he said good-by? I declare, I didn't notice it. Is my hat on straight, Laura?"—*San Francisco Post*.

A FINANCIAL DISCUSSION.

Country storekeeper—"There's a sayin' that 'Time is money,' but I don't take much stock in it."

Loafer—"You don't, eh?"

Country storekeeper—"No, I don't; an' I wish you'd spend a little more of your money here an' a little less of your time."—*West Shore*.

SOUND ADVICE.

Daisy Flutter—"Oh, Maissy, I don't know what to do. Old Mr. Doddering and Jack Margin have both proposed, and—"

Maissy Marigold—"Take Doddering. He's already rich and already old. Jack is not sure of getting rich, but he is sure of getting old."

A WRITER.

"I write for the *Century Magazine* now," said Scribulus.

"Ah!" replied Pennibs, admiringly. "Regularly?"

"Yes; every six months. You see I only subscribe for a half year at a time."—*Life*.

COOLNESS ITSELF.

Mrs. Hicks—"Who was the most impudent man you ever knew?"

Mrs. Dix—"Well, I always thought pretty well of a fellow who used to drink my milk on the front step every morning and ring the bell for a napkin."

A MODERN IMPROVEMENT.

"How's this, Dauber? You've painted Father Time with a mowing machine instead of a scythe."

"That's all right. We artists of the modern school keep up with inventive progress."

NATURE DOES NOT CHANGE.

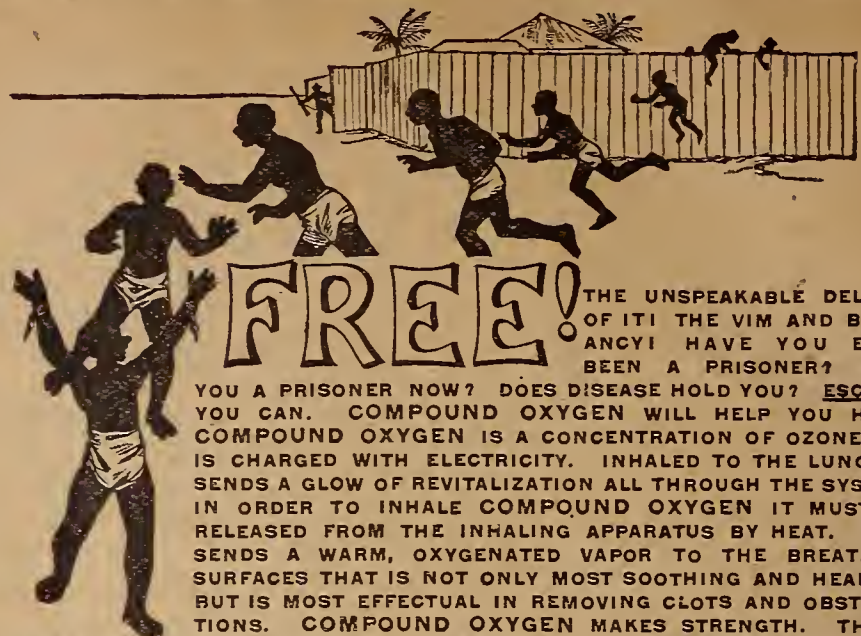
Bellamy—"If the theories of socialism were adopted, sir, men would live as happily as children do now."

Smith—"Yes; each one watching greedily to see that nobody else got a bigger apple."

CORRECT.

Teacher—"To what circumstance is Columbus indebted for his fame?"

Tommy—"To the circumstance that America was not already discovered."—*Texas Siftings*.



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Selections.

"DOESN'T KNOW THE WORDS."

"I cannot sing the old songs,"
Though well I know the tune,
And I cannot carol like the bird
That sings in leafy June.
Yet though I'm full of music
As choirs of singing birds,
"I cannot sing the old songs,"—
I do not know the words.

I start on "Hail Columbia"
And get to "heaven-horn hand,"
And there I strike an up grade
With neither steam nor sand.
"Star Spangled Banner" throws me
Right in my wildest screaming,
I start all right, but dumbly come
To voiceless wreck at "streaming."

So when I sing the old songs,
Don't murmur or complain,
If "Ti, de ah da, tum de dum"
Should fill the sweetest strain.
I love tiddy um dum di do,
And the tra-la-la cep da birds,
But "I cannot sing the old songs,"—
I do not know the words.

NO REMEDY FOR WRINKLES.

It is common to speak as if any care of the skin beyond personal cleanliness was foolish and a sinful waste of time. This is but a remnant of the old idea, which rigid Puritans held in common with Catholic ascetics, that it was inducive to a salutary frame of mind to make the dress as hideous as possible, and show one's contempt for the natural beauty which God has lavished all over the face of the earth. A soft, beautiful complexion is certainly an attraction which every woman should desire, and any simple means, which does not occupy time needed for more important matters, should be tried to attain such an end. There are many complexions which chafe readily, and tan in the spring winds. A simple preparation of sweet cream rubbed into the skin, after washing it thoroughly, is a remedy for this trouble. This should be applied at night, just before retiring, and the next morning the face should be washed thoroughly, first in lukewarm water, and afterwards in cold, to give tone to the muscles.

Some ladies who do not find glycerine irritating to the skin use in the same way a small portion of it diluted with half its bulk of rose water. This preparation is rubbed in the face and hands, and gloves are worn at night. A little ammonia in the water is a help toward keeping the skin firm and free from wrinkles. There certainly is no remedy for wrinkles after they come. It should be remembered, however, that an amiable temper, a clear conscience and freedom from a disposition to worry over the petty annoyances of life, are qualities of mind and heart that will keep the face free from wrinkles and beautiful to the ripest old age. A habit common with studious children, and those who are near-sighted, is to knit the brow. This often causes premature lengthwise lines in the forehead.—*Hall's Journal of Health.*

RICHES OF OREGON.

There is a tract of forest trees in southern Oregon, embracing about 16,000 square miles, which, if cut and sold at \$10 per 1,000 feet, would pay our national debt twice over. It is estimated that the amount of merchantable timber standing amounts to 400,000,000,000 feet.—*Oregonian.*

Little Hazel was five years old when she was traveling with her mother on a crowded steamer where they occupied a state-room with myself. For a long time after we had retired she talked in a low tone to herself. At last her mamma asked: "What are you doing, Hazel?" "I'm thinking." "Well, don't think aloud." "I wish I didn't have a thinker," replied she. But seeming to realize that that would be unfortunate, added, "I wish my thinker had a faucet, so I could shut it off and go to sleep."

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INVENTION THE FRIEND OF WOMAN.

The most conspicuous, as well as the most beneficent, of the sociological changes which this century has witnessed, has been a steady and great improvement in the condition of women as a result of inventive progress. Within the memory of persons who are not very old, the average woman's life was one of cheerless drudgery. Sixty or seventy years ago there were comparatively few American families whose "women folks" did not do all the house work without the aid of servants. It was hard work—brutally hard we should call it in these days—for it was unrelieved by any of the varied appliances that have since been devised to facilitate or obviate it. And this tedious toil, including spinning, weaving and churning, was performed in houses whose inmates had never heard or dreamed of the thousands of elegancies, luxuries and comforts that are now within the easy reach of the "common people."

Then there were but two kinds of occupation open to our young women—house-work and school teaching—and the latter was accessible to but a limited number and at small compensation. When invention began to open up manufacturing in-

dustries, the area of woman's work grew immensely. Then came the sewing machine; as great a blessing as if it had been handed down from the Great White Throne. Meantime, the progress of civilization brought about a better appreciation of woman's value as teachers, and they began to supersede men in that great calling. Manufacturing industries, in which women had a place, multiplied rapidly between 1840 and 1860. Since that date the telephone, the type writer, increased demands for stenographic clerks, and a constant advancement of correct notions of woman's place in the world, have opened avenues in which vast numbers of women and girls are usefully and happily employed. There are few occupations now to which women are strangers, and the condition of society is immeasurably improved by this multiplication of the employments of women. Greater than the influence of the school-master or the preacher, has been that of the inventor in bringing about the emancipation and elevation of the "better half" of the human family.—*Inventive Age.*

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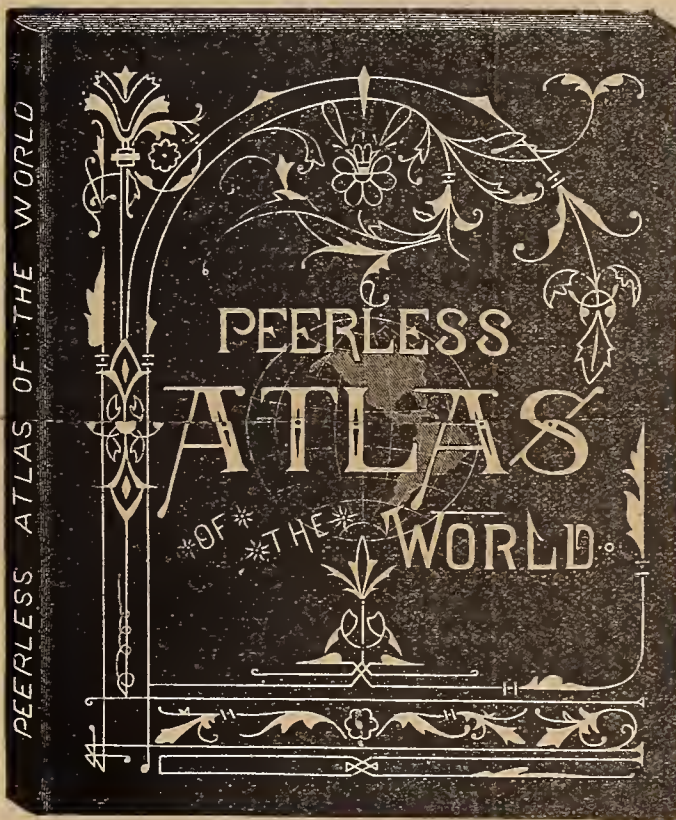
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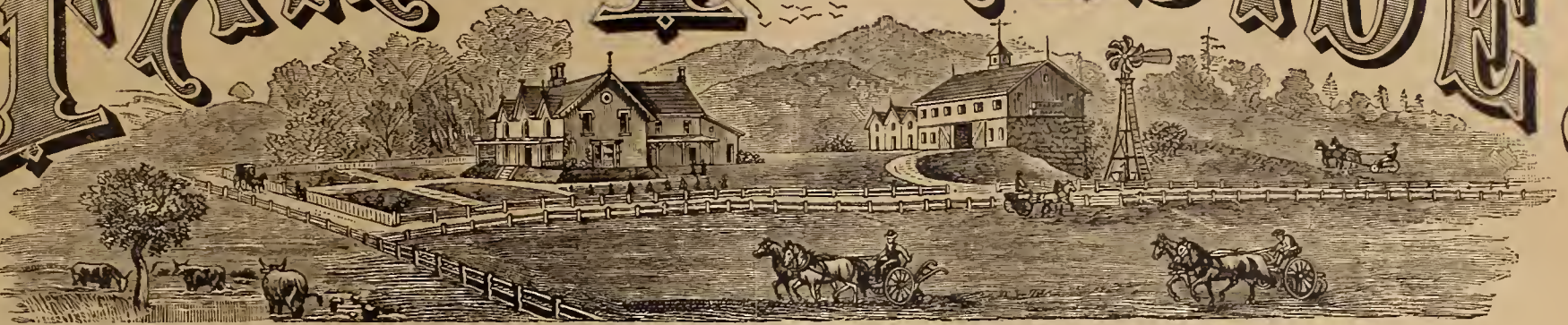
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Price of one package, including this paper one year, 65 cents; price of two packages, including this paper one year, 75 cents.

We offer one package for sale for 20 cents, or two for 30 cents. Postage paid by us in each case.

FARM FIRESIDE



2 EXTRA PAGES THIS ISSUE.

EASTERN EDITION.

VOL. XIV. NO. 14.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, APRIL 15, 1891.

TERMS (50 CENTS A YEAR.
24 NUMBERS.)

The Circulation of FARM AND FIRESIDE
this issue is

250,700 COPIES.

The Average Circulation for the 24 Issues of
the last 12 months, has been

250,687 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,300 copies, the Western edition
being 150,400 copies this issue.

Farm and Fireside has the Largest Sub-
scription List of any Agricultural
Journal in the World.

Current Comment.

IN A former issue were given the first
census statistics ever taken of truck
farming. Doubtless many of our
readers were surprised that the industry
had become such an important one as
shown by the statistics. The following
notes are taken from the census bulletin
on truck farming:

"Truck farming, although it also consists in
the production of green vegetables for market,
is distinguished from market gardening by
the fact that, while the market gardener lives
near a market and delivers his products with
his own teams, usually producing a general
variety of vegetables, the truck farmer lives
remote from market, is dependent upon trans-
portation companies and commission men for
the delivery and sale of his products, and
usually devotes himself to such specialties as
are best suited to his soil and climate.

Previous to 1860, truck farming was an infant
industry, unknown except to a very limited
extent along the steamboat and railway lines
leading out fifty miles or so from a few of the
larger northern cities. Long Island, New
Jersey, Delaware and southern Illinois ap-
pear to have been at that time the leading
truck centers of the country.

The rapid growth of cities and towns, how-
ever, and their consequent demand for a
greater quantity and variety of vegetables
throughout the whole year; the changed con-
ditions in the south after the close of the war,
and the extending of old and building of new
lines of railway, all combined to extend the
business, until a very considerable portion of
the vegetables consumed in cities and towns
are produced from five hundred to fifteen
hundred miles away. Instead of having veg-
etables in their respective seasons, by drawing
upon the various sections of the country,
nearly all the standard vegetables are pro-
duced throughout the year. Late in the fall
and early in the spring, Florida and the lower
Mississippi valley supply the eastern and cen-
tral cities, and California those of the far west
and mountain section, until the advancing
season, at the rate of about thirteen miles a
day, starts the growth and consequent supply
up along the Atlantic coast and the great
Mississippi valley, when the full season of
midsummer in the north continues the supply
until autumn frosts once more compel a re-
turn to the south, where a fresh crop awaits
the demands of the market. While through-
out the year California, out of her abundant
store, sends products to her own large cities
and those of the Rocky Mountain region, and
even as far east as Denver, Kansas City, Saint
Louis and Chicago, the greenhouses of New
England in early winter and spring supply the
more tender vegetables that do not well with-
stand the deterioration of transportation, or
are profitable enough to pay for the extra ex-
pense of their culture under glass. New pota-
toes, cabbage, cauliflower, garlic and tomatoes
have thus far been about the only products
received at Saint Louis, Kansas City and
Chicago from California, and these only in

limited quantities in seasons when there has
been a partial failure in the lower Mississippi
valley and in Florida. During December and
February of the present winter, superb to-
matoes came from California and sold at prices
that left a small profit to the grower, after
paying the enormous express charges that
must of necessity be charged for so long a haul;
but, with the further development of railways,
faster trains and lower freight and express
rates, that state will be in a position to com-
pete sharply for much of the trade beyond the
Mississippi, for, besides the natural fertility
of a soil that will grow almost every vegetable
to perfection, she has a climate where winter
vegetables are not likely to be occasionally
cut off by frost, as in the South.

Taken in its entirety, this comparatively
new industry is found to be in a healthy,
prosperous condition. New sections are being
developed from year to year that, to a certain
extent, affect the prosperity of some of the
older ones, and there is likely to be more or
less shifting of trucking centers every few
years, all upon advancing lines, however.
New and better methods of culture, with the
further invention of labor-saving machinery,
must of necessity reduce the cost of produc-
tion. Better transportation facilities will
place the products of these farms in cities and
towns more promptly, in better condition,
and at less cost, while the ever-increasing
population and wealth of the cities and towns
insure a greatly increased consumption at
satisfactory prices for first-class productions.

THE federal meat inspection law,
passed at the close of the last con-
gress, is going to be a great benefit
to the cattle and swine growers of this
country. Since this law, which provides
for the inspection and marking of export
cattle, has gone into effect, cattle have been
admitted to several European countries
from which they have hitherto been ex-
cluded on various pretexts. In the Chi-
cago market export steers are quoted at
\$5.35 to \$5.80. It is claimed that this price
is at least \$1 higher on account of the
working of the new law.

This law also authorizes the Department
of Agriculture to make a thorough in-
spection and microscopical examination
of all meats intended for interstate or
foreign commerce. None but perfectly
sound and healthy meat is to be exported,
so that foreign governments can have no
valid objections to it. American pork
has been excluded on the ground that it is
affected with trichina. A microscopical
examination is necessary to determine
this, hence the requirements of the new
law. The Department will have a large
amount of work to do to carry out the
provisions of the law. It will require an
army of inspectors and microscopists to
do the necessary work. If, however, the
work is faithfully done, it will be a great
benefit to the swine and cattle growers of
the country.

The question arises right here, why not
stamp out trichina? The government
has stamped out pleuro-pneumonia. That
would go right to the bottom of the mat-
ter. It can be done. There is a bill now
before the Ohio legislature that will, if en-
acted into a law, do much toward stamp-
ing it out. The bill referred to requires
that dead animals shall be cremated or
buried deeply, so that their flesh cannot
be eaten by other animals.

If meat is thoroughly cooked there is
no danger from trichina. These parasites
are destroyed by a heat of 160° Fahren-
heit. If no raw or rare pork were eaten,
the trichina would be destroyed and all
danger avoided. Nor should swine or
other animals be allowed to eat raw meat.

Slaughter-houses, where hogs are fed on
the offal, are the worst possible centers of
contagion. A few wholesome laws, faith-
fully enforced, would soon stamp out
trichina and save the immense work of
making a microscopical examination of all
meats intended for interstate or foreign
trade.

THE *Commercial Gazette* has the fol-
lowing kind words to say of the
Department of Agriculture:

By its complete reorganization on the basis
of an executive department, Secretary Rusk
has greatly increased the effectiveness of the
Department of Agriculture. The scientific in-
terests of agriculture have been placed under
the supervision of a most efficient assistant
secretary, matters executive and administra-
tive being reserved, however, for the secretary's
own attention.

The want of a prompt and widespread pub-
lication of the results of the department work
has been met by the establishment of a special
division. The first efforts of the new division
were directed to establishing such relations
with the agricultural press as would enlist in
the work the cordial co-operation of this vast
organization, and in this respect have been
singularly successful. The publication of
synopses of department bulletins, and the
issue of a special series known as *Farmers'*
Bulletins, have been undertaken on a scale so
extensive as practically to reach all the farm-
ers in the country.

Not the least among the reforms inaugurated
by the efficient and busy secretary, may be
mentioned the scope and sphere of the im-
portant forestry division, which have been greatly
enlarged, and this work, for the first time,
placed upon a footing of practical utility to
our immense forest interests, the magnitude
of which can only be realized by the statement
that, according to the best available author-
ities, our annual forest production amounts to
\$700,000,000, an amount which the application
of a judicious system would enable us to main-
tain without an impairment of our vast re-
sources.

The work of the division of vegetable pa-
thology, both in the laboratory and in the field,
has been practically developed under this ad-
ministration. Results already attained have
proved of incalculable benefit to agriculture.

The Weather Bureau, now in the War De-
partment, will soon be transferred to the
Agricultural Department, and Secretary Rusk
is already preparing to greatly extend its
efficiency and usefulness.

THE Ohio experiment station has
made some interesting experiments
showing the effect of removing
tassels from corn. They were made to
test the theory that if the tassels were
removed from corn before they have pro-
duced pollen, pollen bearing being an ex-
haustive process, the strength thus saved
to the plant would be turned to the
ovaries and a larger amount of grain be
produced.

From each alternate row of a plot of
corn the tassels were removed as soon as
they appeared. Briefly, the result of the
experiment was that the number of good
ears and the weight of merchantable corn
were both a little more than fifty per
cent greater on the rows from which the
tassels were removed than on the others.
Here is an experiment which any farmer
can easily repeat for himself, and deter-
mine whether the work is profitable or
not.

THOSE who make fortunes at a single
stroke are very few in number.
The only sure way to prosperity
for the great majority is the saving of
small sums. Just as the daily spending
of small sums will soon dispose of a large
bank account, so the daily saving of small

sums soon makes a respectable accumula-
tion, although few seem to realize it. The
practice of saving small sums induces val-
uable habits of thrift and economy among
people whose daily earnings are small,
and by developing their business qualities,
increases their power of earning money.
Savings banks were instituted first for the
very lowest classes of wage earners. But
it was soon found that they were a benefit
to all classes, and since then their growth
has been marvelous. Savings banks and
building and loan associations are pre-
eminently the banks of the people, and
furnish the safe and sure means by which
thousands in time secure homes of their
own.

THE Secretary of Agriculture has sent
to the agricultural press a detailed
statement of the appropriations
made by the government to his depart-
ment, from which we take the following
summary:

| APPROPRIATIONS BY THE FIFTIETH CONGRESS. | | | |
|--|----------------|----------------|--|
| Agricultural department | 1888-'89. | 1889-'90. | |
| proper..... | \$1,120,826.14 | \$1,079,770.00 | |
| Printing (by Pub. printer) | 40,914.37 | 39,235.45 | |
| Total..... | 1,161,740.51 | 1,119,005.45 | |
| Agricultural Experiment Stations..... | 595,000.00 | 600,000.00 | |
| Total..... | 1,756,740.51 | 1,719,005.45 | |

Comparison of figures shows the
total appropriation for the de-
partment by the Fiftyeth Con-
gress, leaving out the experiment
stations, to have been..... \$2,280,745.96
And by the Fifty-first Congress..... 2,499,500.00
An increase since the department
became an executive branch of
the government of..... 218,754.04

| APPROPRIATIONS FOR OTHER DEPARTMENTS FOR THE CURRENT FISCAL YEAR. | |
|--|-----------------|
| | 1890-'91. |
| State Department..... | \$ 1,878,670.49 |
| Treasury Department..... | 28,850,939.19 |
| War Department..... | 64,091,539.57 |
| Navy Department..... | 24,666,028.52 |
| Interior Department..... | 120,587,167.62 |
| Post-Office Department..... | 866,039.41 |
| Department of Justice..... | 4,380,963.70 |

THE discussions on the tax bill before
the Ohio legislature brought out
many facts on the inequalities and
unfairness of the system and methods of
taxation in vogue. Hundreds of thousands
of dollars worth of property escape tax-
ation entirely. As much or more is listed
at ridiculously low figures. There is deep
indignation on the part of those who pay
taxes honestly. And there is a deter-
mination on their part to have the law-
makers pass measures that will equalize
the burdens.

ONE of the most potent factors in the
distribution of weed seeds over
the farm, is the owner's own hand.
Millions of foul seeds are scattered over
the land with barn-yard manure; but such
seeds are also sown in well prepared and
fertilized soil, mixed with grain and grass
seed. The farmer, being unacquainted
with the looks of such seeds, is unaware
of the mischief he is doing when he sows
foul clover and grass seed.

ALLIANCE men, as a rule, are opposed
to national banks, and demand
their abolition. But while waiting
for that to be done and a better system of
banking substituted, some Alliances have
organized national banks of their own.
That is a good move. National banking
is free, and an Alliance can have all the
benefits they claim are conferred by the
government.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
MAST, CROWELL & KIRKPATRICK.THIS PAPER HAS BEEN ENTERED AT THE POST-OFFICE
AS SECOND-CLASS MAIL MATTER.

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small towns.

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fully wrapped in cloth or strong paper, so as not to
wear a hole through the envelope and get lost.
Postage stamps will be received in payment for sub-
scriptions in sums less than one dollar.

The date on the "yellow label" shows the time to
which each subscriber has paid.

When money is received the date will be changed,
which will answer for a receipt.

Discontinuances. Remember that the publishers
must be notified by letter when a subscriber wishes
the paper stopped, and all arrearages must be paid.

When renewing your subscription, do not fail to
say it is a **renewal**. If all of our subscribers
will do this, a great deal of trouble will be avoided.
Also, give your name and initials just as now on the
yellow address label; don't change it to some other mem-
ber of the family; if the paper is now coming in your
wife's name, sign her name, just as it is on label, to your
letter of renewal.

We have an office at 927 Chestnut Street, Phil-
adelphia, Pa., also at Springfield, Ohio. Send your
letters to the office nearest to you and address

FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

The Advertisers in this Paper.

We believe that all the advertisements in this paper
are from reliable firms or business men, and do not in-
tentionally or knowingly insert advertisements from
any but reliable parties; if subscribers find any of
them to be otherwise we should be glad to know it.
Always mention this paper when answering advertise-
ments, as advertisers often have different things ad-
vertised in several papers.

Our Farm.

SILOS AND ENSILAGE.

IAST issue I presented claims
for silos and ensilage that
to some may seem beyond
the reach of the common
farmer; but such is not the
case. He can have the silo,
he can raise the ensilage
corn, he can make warm
barns out of his old, cold
shells almost without ex-
pense and do it with his own hands.
Silos, if built in our common barns, must
have studding to nail on the ceiling of
the pits that come out flush with the
beams, sills or posts of the frame, so that
in ceiling up inside of a pit, it may be
smooth from top to bottom, with no pro-
jections to prevent the free settling of en-
silage after the silo is filled.

Many use the old bay part to their
present barns, letting it start from the
ground and reach up to the plates of the
barn. The deeper pits can be made the
better ensilage will settle and pack. I
have two pits made in this manner in one
of my stock-farm barns that were put into
an old bay, and they finish up 14x15 feet,
in a barn 32 feet wide, outside measure.
The posts of this barn were 16 feet high
to the eaves; but we let the bottom go
below the barn sills, which rest on a solid
stone wall laid in mortar, and these pits
are 18 feet deep.

For floors to these silos we drew in six
or eight inches of cobble-stone, and laid it
on top of the clay ground; and on top of
this put a layer of coarse creek gravel, to
even it all up level. This makes us a
splendid floor to the pit. We put a little
fine waste straw on the ground, and from
our first two fillings of these pits there
has been no loss.

The lateral pressure of ensilage is con-
siderable; therefore, the inside partition
wall of a silo, if 16 to 20 feet deep, should
be at least 2x10-inch studding, set up end-
ways, from 12 to 14 inches from center to
center; and the outside by frame of the
barn, of course, 2x5 or 2x4. Just whatever
is necessary to fill out flush with the beams
in front of the girts is all-sufficient, for
the frame of the barn will hold it firmly.
Nail on the partition ceiling first, both
sides. Then spike on a 2x4 piece over the
ceiling in the corners, to come even with
side studding to the pit, in order to nail
the side ceiling on and make the corner. It
is then utterly impossible for the partition
to give out when you are filling one pit at
a time, or when you are emptying one at
a time, as you always will. Please re-
member this, because I have seen some
excellent silos give out from this very
defect of ceiling up the side-walls first and
putting in the partitions last. The repair
was expensive and the partitions had to

be drawn back to place with long iron
bolts.

I am very much in favor of horizontal
ceiling, because when you empty the pit,
the ceiling dries out evenly, a board at a
time; while if it is upright ceiling, there
will be weeks that the top part of a board
will be dry before the bottom of the pit is
reached, and it does not keep the lumber
so even and nice. The ceiling of a pit
should always be single thickness, planed
and matched lumber. One inch is heavy
enough; and never over four inches wide,
and may be as narrow as two inches just
as well. When such a pit is filled with
the finely-cut, green ensilage, the juice
from it will soon soak the lumber up air-
tight and water-tight, and it will then re-
main in this perfect condition as long as
the contents remain in the silo. As you
feed from the silo, the top boards of the
pit will begin to dry out, and so continue
until you reach the bottom of the pit; and
the lumber will then resume the normal
condition.

Now, if the ceiling of a pit is double
boarding, with paper between, or even
without paper, the above result can never
be obtained, for the reason that between
the boards there will be retained moisture
all the time, and instant and speedy de-
composition must take place. Every sane
man knows this who knows anything of
the nature of lumber. The idea that a
nearer air-tight wall can be made with
two boards lap-jointed, or that wider
lumber may be used and built cheaper,
does not prevent this decay I mention, nor
warrant any man in building in this per-
ishable manner. The principle of a silo
is exactly the same as that of a liquor
barrel. When you make a barrel water-
tight with a single thickness of staves,
would you ever be silly enough to put
another casing of staves around the first
ones, expecting to make it better? No, of
course you will not accept any such non-
sense. The silo is exactly the same, and
it is as idiotic to double the boarding of
the pits as it would be for a barrel.

Again, some teachers place great stress
upon paint or coal tar to cover the ceiling
of a silo inside. I consider this useless
expense. When we fill the silo we desire
the lumber to swell speedily as possible,
and any such hindrance forces us to wait
until the moisture goes through the cracks
of the ceiling and soaks up the lumber
from the back side. It has got to swell up
water-tight to be perfection, and when
once in that condition, it stays so until
the contents of the silo are removed; when,
as I stated before, the lumber will dry out
quickly, and there will be no perceptible
decay. My pits have been filled five
times on my home farm, and to all ap-
pearance they will be good for fifty years
longer.

The outside covering of common barns
is sufficiently warm for ensilage. There
is no danger of frost, because the heat of
ensilage keeps from eighty to ninety de-
grees in the pit for months, or until nearly
all fed out. It is a fatal mistake ever to
fill the air chamber between inside ceiling
of a silo and outside covering of a barn or
silo, if it is made independent of the barn,
thinking to prevent frost. Such filling
will rot the pit out in but very little time.
I know one that gave out from this cause
the third year.

My silo pits, 15x15, require 30 head of
cattle, or more, to feed them down fast
enough to keep the ensilage in prime con-
dition. 100 square feet surface, say a pit
10x10, does very well for 10 to 15 head of
cattle; but the smallest pit I ever heard of
is that of Mr. Peter McGraw, of Meadville.
It is only 4½ feet square and about 16 feet
deep, for one little Jersey cow, kept on
his door-yard farm, and he says the silo is
a complete success for just one animal.
From the above information every man
can estimate very fairly about the size of
a silo he will need. I find it requires
about five tons of ensilage and half a ton
of clover hay to each animal to winter-
feed them six months. My four silos
hold two hundred tons of ensilage, and
usually twelve acres of my ensilage corn
will fill them heaping full, or about twenty
tons per acre. Last season I only had
about sixteen tons per acre. It was a hard
year for us to raise corn here, but never-
theless, my usual number of acres is going
to winter the forty-two head of cattle.
Farmers keeping a large stock of cattle
and wishing to prepare for one hundred
head or more, will do well to make long,

narrow pits, no matter how long, only
so they hold enough. Then open one end
of the pit only, and feed from it all the
time, raking down the ensilage and slant-
ing it just enough so it will stay in place.
It does better than to have partitions in
the way.

Silos built independent of barns up to
12 feet high, 2x8 studding, is sufficient;
but if 16 to 20 or more, it certainly should
be 2x10 or more, or the sides of the pits
will bulge out of shape with the lateral
pressure of the ensilage.

Any log-house carpenter can build a
silo. Every farmer can do the work him-
self at odd times, and only be out the cost
of lumber and nails, which I told you last
issue were so very cheap. To-day, while
writing this article, my son came in the
office with two pairs of pants he had just
bought at one of our clothing stores for
my little grandson, at ten cents per pair;
and he thought the price must be inflated
about four cents on each pair in con-
sequence of the McKinley tariff bill. Oh,
how oppressive; but the children must
have clothes, and farmers can meet this
by better methods and the benefits of the
silo.

The feed door to a silo pit I find is best
made by leaving a two-foot wide space,
from the bottom clear to the top of the
pit, and fill this space with tight, matched,
narrow boards, cleated, so they can be
put in the doorway as you fill the pit. Let
them lap over on the inside about two
inches and then come up in sections two
or three feet high. The pressure of the
ensilage will hold them against the ceiling
of the pit air-tight. I have made all of
mine about three-foot sections, heavy
enough so children will not run away
with them when not in use. I would not
give much for a farm without children on
it to help take care of it, and raise mis-
chief besides.

Silo pits made as above described, can
be filled by our modern ensilage cutters
regardless of height from the ground, be-
cause they have feed-carriers to them that
shoots it as high as you choose. My doors
to fill the pits are eighteen feet above the
ground. We set our large Ohio feed-cutter
on a plank platform laid down loosely on
the ground, and with our twenty-four-
foot carrier we can run fifty to seventy-
five tons per day up the spout and into
the pits. Don't make a mistake in getting
a feed-cutter with little, fine cog wheels,
to run with traction engine power, where
three men are feeding as fast as it can be
taken from a load. I tore three such
machines all to pieces the first five times
using them. I now have a strong one.

Silos built in second stories of barns
must be well supported beneath with
heavy joists and also cross timbers and
posts to rest them on. My pits being
only fifty-ton pits, I used 3x10 joists, 12
inches from center to center, and as they
are 15 feet long, I put in two rows of
bridging, 5 feet apart; and with this heavy
joisting and partition studding under-
neath in my stable, it holds it up, and no
settling or failure. My flooring is the
same as the ceiling. Mr. Huidakooper's
were 3x10 joints, and they were supported
by timbers and posts, for each of his six
silos upstairs would hold about two
hundred tons.

If you build outdoor silos, or by the side
or end of your present barns, first lay a
foundation wall, to rest the sills on, and
high enough above ground to protect the
sill from rotting. The ceiling inside can go
clear to the ground, and it is better to have
an air chamber between it and the wall,
which you can easily do by facing the
wall inside as you lay it up, and let the
sill project over two inches. The wall
will not then absorb heat of the ensilage.
You then have the cheapest and best silo
in the known world. Good, yellow pine
or yellow whitewood ceiling will last
longest and best; but I make mine out of
cheaper lumber—ash, maple, elm and
some cucumber, what I get from my own
farm.

H. TALCOTT.

COMMENTS ON CURRENT AGRICULTURAL
LITERATURE.

BY JOSEPH (T. GREINER.)

THE NEW POTATO CULTURE.—I take it
for granted that the great majority of my
readers are familiar with the efforts made
by Mr. E. S. Carman, editor of the *Rural*
New-Yorker, in the direction of discover-
ing means and methods by which large
yields of potatoes may be secured to an
absolute certainty. It will be remembered

that he once raised the Green Mountain
potato, although on a rather limited scale,
at the enormous rate of thirteen hundred
and ninety bushels per acre, and that in
1889 he failed to raise three hundred and
fifty bushels or upwards on one half acre
of measnred ground, only because the
plants on part of the field were destroyed
by flea-beetles. For the past fifteen years
Mr. Carman has been faithfully laboring
on the solution of the problem "How to
increase the yield without proportionally
increasing the cost of production."

In "The New Potato Culture," which is
a beautifully-printed, well-bound book
of some one hundred and sixty pages, Mr.
Carman gives a summary of the experi-
ments carried on by him and of the
results obtained, and this in a way that
sets the reader to thinking. The author
has avoided the beaten track of giving
mere cultural directions. The book is not
a guide to potato culture, but a guide to
the use and discovery of improved
methods in potato culture. "Its object
will be to show all who raise potatoes
that the yield may be increased threefold
without a corresponding increase in the
cost; to show that the little garden patch
of a fortieth of an acre, perhaps, may just
as well yield ten bushels as three bushels."
It is only too true that such an increase
in yield is not only possible, but within
easy reach of every good soil tiller, and
the lesson is one that should be urged
upon our potato growers unceasingly and
forcibly until it is better understood by
them than at present.

A considerable share of the credit for
the increased yields is given to the "trench
system," of which Mr. Carman claims to
be the originator. I do not remember
ever having heard anything of the "trench
system" before Mr. Carman's time, and
he certainly deserves credit for bringing
it out. On the other hand, this plan is
quite an old one and has been practiced
for generations in Germany. Subsoil
plows are in use in the "fatherland" much
more than they are in America. Good
farmers in Germany, who operate with
soil of a somewhat clayey nature, quite
commonly follow with the subsoil plow
after the ordinary plow, in the furrow
opened for planting the tubers. It is a
good practice for such soil and can hardly
fail to be of benefit.

The author was also the first to empha-
size the advantages of level, or nearly
level, culture for potatoes (and other crops
as well). Now, the great majority of
farmers are yet making high hills and
thus reducing their yields, often quite
considerably. Mr. Carman quotes from
Mr. T. B. Terry's comments, as follows:

"If farmers would only stop to think a
moment, they would give away their
shovel plows, as the writer did years ago.
On a field cultivated level and the surface
all mellow, the rain goes right down
where it falls, wetting all the soil and
carrying what fertility it has in it right to
the growing roots that extend all through
between the rows. Where a shovel plow
is used before a heavy shower, much of
the water runs off in the furrows, carry-
ing its fertility with it. The ground in
the hills, instead of being a yielding
medium, often gets so dry and hard that
the yield is injured. Level soil will stand
drought best. In a wet season, potatoes
will stand hilling better, but on drained
land, even then hills are an injury.
When one takes soil from between the
rows to pile up around the hills, he is lay-
ing bare, or nearly so, the roots that are
alone in the center. This is abusing the
plants, and on drained land I know of no
possible benefit to be derived. Better
plant about four inches deep and keep the
ground nearly level. In practice, I have
to throw a little dirt under the plants with
the Planet horse-hoe; but we keep the
surface as nearly level as possible. After
raising many thousands of bushels in this
way, we find no more greened or sun-
burned than when we hilled up high; in
truth, I think not so many."

Here is good advice: The old "hill"
system is an absurdity, and the sooner the
potato grower (and corn grower, also)
abandons it, the better for him.

In reply to the question, What vari-
eties would you select as likely to give
the greatest number of bushels to the
acre? Mr. Carman gives the following
list: "Silver Lake, Everett, Summit,
Jewell, Columbia, Charter Oak, Morning
Star, Early Gem, Snowflake, Late Ver-
mont, White Elephant or Late Beauty of

Hebron, White Star, Burbank, Empire State, Home Comfort, Early Maine, Cream of the Field, Dakota Red, R. N. Y. No. 2, Brownell's Winner, Corliss' Matchless, Bonanza, Late Hoosier, Montreal, Green Mountain, Hodgman's Seedling, Nott's Vicfor, Pearl of Savoy, Early Puritan, Rural Blush, Minister, Tonhosks, Crown Jewel, Polaris, Delaware." My experience is that we find the heaviest yielders usually in the newer varieties. Our system of planting and cultivation seems to tend to a speedy deterioration of the yielding power of any variety. The reason is perfectly plain to me. Still, as most sorts seem to be suited to some soils and locations more than to others, we should make our selection on the solid foundation of past experience of our own and our neighbors. Never plant an untried variety very extensively.

Altogether Mr. Carman's book is worthy the careful study of everyone who grows potatoes for market or home use. It cannot be read without arousing or stimulating thought and study in the reader—one of the best things that could be said of any book. Published by the Rural Publishing Co., New York City. Price in cloth binding, 75 cents; paper, 40 cents.

SPRAYING WITH COPPER SOLUTIONS.—Spraying trees and plants as a protection for fungous diseases, has now become the rage. Article upon article on the subject appears in the rural press, and bulletin upon bulletin is issued by the experiment stations, and still the subject deserves this thorough ventilation. The necessity of spraying cannot be urged too strongly at this time, for it now looks as if we were placed before the alternative—spraying or no crop. Our potato patches will most likely suffer again from blights, etc., if we do not find means to prevent the attacks. From all I can learn at present, and from private advices of experimenters in Germany, I think we can put it down as a fact, that the Bordeaux mixture is more effective than the ammoniacal copper carbonate solution, or the simple *cavi celeste*. I, for my part, have made up my mind to use the former on my potatoes, and experimentally only try the copper carbonate. In the meantime my friends will do well to send for the station reports and study them, as well as the information given in the agricultural papers.

DIRECTIONS FOR MAKING SORGHUM MOLASSES.

The sorghum canes, properly stripped of leaves, and with the seed tops removed, are passed through a mill adjusted to extract as large a per cent as possible of the juice. A first-class, three-roller horse mill, properly adjusted, will extract from 60 to 65 pounds of juice from each 100 pounds of clean cane. In case the molasses shows a tendency to granulate, the cane should be cut and allowed to lie in the field three or four days before being worked. If the molasses does not show any tendency to granulate, it is best to have the cane worked as soon as possible after harvesting.

As soon as the juice is expressed, it should be treated with cream of lime, which has been thoroughly strained so as to contain no large lumps of undissolved lime. In a tank a convenient size, two thirds filled with juice, the cream of lime should be added, little by little, stirring so as to incorporate it thoroughly with the juice. As the point of neutrality is reached, the juice will show a large amount of flocculent matter and will slightly change in color, passing from green to amber color. Care must be taken not to add an excess of the cream of lime, the result of which would be a darkening of the molasses. The proper point may be soon learned by experience; it can also be determined directly by litmus test paper. The blue litmus paper should be used. When this blue paper is placed in the natural juice it will turn to light red. As the point of neutrality is reached the change of color in the litmus paper becomes less and less pronounced, and when it is distinctly purple it shows that the proper amount of lime has been added. If too much lime be added the paper will not change in color at all or be made more distinctly blue. Litmus paper can be obtained from any well-equipped drug store.

A very excellent article of molasses is made by adding to the juice treated as

above, some bisulphite of lime. This bisulphite of lime is made by passing the fumes of burning sulphur into cream of lime until it is saturated. The addition of the bisulphite of lime makes the juice again acid, but tends to produce a molasses of a much lighter color than can be made without it. Excellent molasses, however, of a somewhat darker color, can be made without the use of the bisulphite of lime. A good article of molasses of light color can also be made without adding lime; and molasses made in this way is exceptionally good for baking purposes.

The juice, after treatment with the lime, or with the lime and bisulphite of lime, or with the bisulphite of lime alone, should be placed at once in a tank and rapidly brought to the boiling point. It should, however, not be allowed to boil, but when the scum, which is formed over the top, begins to show signs of breaking, the heat should be withdrawn and the blanket of scum carefully removed. The heat may then be again applied until all the green scums have been entirely separated. The purified juice should now be reduced, as rapidly as possible, to the consistency of molasses. This is best done in some form of continuous evaporator, based on the old-fashioned Cook evaporator, in which the purified juice constantly runs in at one end of the evaporator, passes back and forth across it, and the finished molasses runs out at the other end. The more quickly this evaporation can be accomplished the better for the molasses.

When the molasses runs from the evaporator it should be cooled as quickly as possible, and should never be placed in barrels until it has almost reached the ordinary temperature of the air.

These directions are only of a general nature and it requires a large experience to be able to produce always a first-class article of molasses.—*United States Department of Agriculture.*

FARMING ON BUSINESS PRINCIPLES.

While looking about for the cause of agricultural depression, we should not fail to scrutinize those things that come more directly under individual control. It is true we have just cause for criticising our public officials, but at the same time, if we examine our own management of individual affairs on the farm, we may sometimes find sources of loss that could easily be remedied.

Among other things, the farmer should have some systematic method for keeping his accounts. He should have this system so arranged as to enable him to ascertain which crop yields the greatest profit, or which line of stock is more profitable for him to raise. It is a lamentable fact, however, that a comparatively small number of farmers keep any accounts whatever. The general excuse is that they have not the time, or that the varied complexities of their business render it impossible to so systematize it as to make book-keeping practical. As to the first excuse, it will not hold good, for many farmers waste enough time to keep several sets of books. Besides, in many families there are boys or girls to whom the task would be a great benefit. The second excuse has a better foundation, yet farm transactions may be so recorded as to be of great value. We could not think of contending against the low prices of the present time did we not produce those articles which our books show to be the most profitable. For farmers who have no knowledge of book-keeping we would suggest the "Manual and Record," a large account book, ruled, lettered and spaced for every department of farm operations. Though we have kept careful record of all transactions for twenty years on ordinary blank books, we have lately secured one of these books, as its small cost is no item, and it will enable us to make our accounts more definite and require less time.

We believe farmers should not only keep their accounts systematically, but all contracts, verbal or written, should be properly recorded, that no room may be left for troublesome disputes. Then, again, where everything is thus recorded, the man's house is always "in order," so that when the summons come, his executor will have no difficulty in adjusting his affairs and making a final settlement of the estate. JOHN L. SHAWVER.

BREAKING COLTS.

I do not agree with "Practical Farmer" in his method of handling colts, except so far as kindness and commencing when they are young.

My plan is to tame a colt in the barn; get him used to being handled, etc., before any attempt at breaking. After this, use the rope. This rope should be a 3/8-inch rope twenty feet long. I tie a knot the same as I would for a rope halter about the neck; then pass the rope over the neck, putting it around the under jaw, catching it inside the loop around the jaw; this forms a purchase over the neck. I now have the best "bitting rig" that can be used. With this rope I teach the colt to do my bidding. If obstinate, I give a few smart jerks from side to side. I avoid too long lessons at first. After he is subdued and drives to the lines, I hitch him to my breaking-cart, which is made with pole thills and a stout cross-bar close behind the colt. I use an inch and a half kicking-strap, which prevents him from using his heels if he should be so inclined. In my experience of many years in colt breaking, I have always found that a colt well broken to drive single, never fails to drive or work by the side of another horse. The essential point in breaking colts is to get perfect control of the mouth.

Michigan.

O. A. WAIT.

THE EFFECT OF BREED ON FEED.

A great many farmers are asking questions of themselves, their neighbors and agricultural journals, concerning food for cows and how to feed it. One point in the economy of feeding many overlook. That is, the value or effect of breed, and individual fitness of the animal, on the feed. This can be made very apparent in the case of horses. A trotter having the trot bred into him will take a moderate feed of oats and trot his mile in 2:20. Another horse bred for draft purposes could not trot a mile in that time if he was fed ten tons of oats. So it is with cows. One cow takes her feed and turns it into milk and butter, and she will eat a heavy ration each day, and still keep in that channel. She has a constitutional fitness for the performance of dairy work; and so feed stimulates her powers in that direction. Another cow having a beef tendency in her blood will do dairy work up to a certain extent, when she turns the food into flesh and fat on her own ribs. Therefore, in the study of economy of feeding, it is highly essential to have the right kind of a cow to put the feed into.—*Hoard's Dairyman.*

WIRING GATES.

I use a good, simple, cheap arrangement to make sagging gates swing clear. Put a wire loop around your gate above the

hinge on the back upright. Let it come one third of the way down on the front upright of gate. Then put a wedge, a little wider than the face of the gate, between the wire and the face of the gate, raise the front of gate up and drive the wedge and wire down. When tight it will hold the front of the gate up nicely.

Illinois.

L. M. HAYDEN.

HINTS.

We are often asked, "What ails the cream? The butter won't come." Divide the milk. Keep that of the cows that will be fresh first by itself. When mixed with the other it causes trouble.

When a man says to me, "You have fine poultry," I answer, "I always keep my best chickens."

When he asks why I do not sell those large ewe lambs to the shipper, I tell him that they are worth more to me, and I point to my flock with pride. I let the shipper have the culls at less price.

When he says, "Why don't you sell that fancy Jersey heifer?" She will bring you a fancy price," I reply that I like fancy cattle myself, and would rather sell that other heifer at less price; then I will have the fancy cows instead of my neighbor who wants her.

The other day, when I sold the roughest mare on the farm, on long time, at eight per cent, he wanted to know why I had not sold the two fine fillies. Either one of them would have brought double the price of the rough mare, and she would have done just as much work on the farm as either one. I said that I wanted to raise fine colts, and the only way to do that is to keep good mares.

Always keep the best stock and the best company has been my motto. Never be bored with a rough horse or a rough, vulgar man when you drive to town on business. Business men and bankers watch your rig and your comrades.

Kentucky.

J. P. HODSON.

A TAIL SWITCHER.

Many cows worry the milker by a persistent switching of the tail. Devices have been invented to prevent this annoyance, but a simple method is free to every one.

Tie a knot in a bunch of hairs at the end of the tail, and thrust one finger through the hairs above the knot. Although attached to the hand, yet it does not interfere with milking, and the continual tugging of the tail to free itself is not powerful enough to hinder the milker. Some one may say that this method is not cleanly. If the cow have proper care, if bedding be supplied, the switch end of the tail will be as clean as any part.

If a piece of twine be woven into the knot and tied around the knot, it will remain indefinitely, and the loop for the finger will be ready for use day after day.

GEORGE APPLETON.

Spring Medicine

Is so important that great care should be used to get THE BEST. Hood's Sarsaparilla has proven its superior merit by its many remarkable cures, and the fact that

Hood's Sarsaparilla

has a larger sale than any other sarsaparilla or blood purifier shows the great confidence the people have in it. In fact

The Standard Spring Medicine

Is now generally admitted to be Hood's Sarsaparilla. It speedily cures all blood diseases and imparts such strength to the whole system that, as one lady puts it, "I seem to be made anew."

Put Down My Name

As one who has derived health from Hood's Sarsaparilla. For many years I have taken it, especially in the early spring, when I am troubled with dizziness, dullness, unpleasant taste in my mouth in the morning. It removes this bad taste, relieves my headache and makes me feel greatly refreshed." JOHN BINNS, 663 43d Street, town of Lake, Chicago, Ill. Be sure to get

Hood's Sarsaparilla

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

HOT-BED MANAGEMENT.—"The hot-bed of the future will not be a hot-bed at all, but a forcing-pit," I said, on a previous occasion. I am now more convinced of this than ever. My disgust with the old manure hot-bed becomes more intensified every year that I live. If I were a gardener exclusively, and had the choice of my location, instead of being compelled to let business considerations overrule my natural tastes and inclinations, and to forego the pleasures and advantages of a permanent home, I would not bother with manure hot-beds. Even as it is, I do not propose to run them another year. It will pay me to put up a forcing-pit, even if I should not wish to remain on this place for more than two or three years.

It is true, a hot-bed is soon made, and at almost any time, provided the weather permits and you have a suitable location for it and the required fresh horse manure, etc. But the weather may remain or turn excessively cold, the March winds may blow and the days may be dark; and to add to your trouble, the manure may not heat as nicely as you wish, and the soil be wet and cold. How different if you make use of hot-water pipes in place of the manure, and fix up a place where you can work with comfort, all under shelter, instead of having to expose yourself and your plants to drafts and biting winds, rains, etc., as is the case with the ordinary hot-bed. I have worked inside of green-houses and forcing-pits enough to know the difference.

Ordinary hot-beds, heated with hot-water pipes—both from underground and along the frames above ground, inside—are much in use among English and German gardeners. Sometimes the waste steam from factories is used for such purposes. The whole arrangement is so simple, and yet so seldom found here. I was glad to see in last *Gleanings in Bee Culture*, that my friend, Mr. A. I. Root, has got onto the idea, and is now utilizing the waste steam from his factory in heating a system of hot-beds. I propose to call on him before long and inspect the arrangement. On the other hand, the whole thing is so simple that it hardly needs much explanation; and the great advantages of beds with controllable bottom heat are also obvious.

I am tired of hunting up "just the right kind" of manure for a lot of beds, and fuss with it and wait for it to heat, and if it does not come to a heat just as I want it, fuss with it some more; and in the end find myself disappointed and dissatisfied with the growth of the plants. The forcing-pit—half hot-bed, half greenhouse—is the thing. The beds are about even with the ground, the alley in the center dug out a foot and a half wide and the same in depth. The roof may be composed of ordinary hot-bed sash; or sash-bars may be made stationary, which, perhaps, is the better plan. A pit of this kind can be constructed with little expense, sash and glass, in fact, being the most important items in cost, as they are in hot-bed making.

To heat the structure properly, of course, requires furnace and pipes, and these fixtures involve some expense. But what comfort the gardener can take in the possession of such a pit; and what a large amount of good, in vegetables, plants, and perhaps money, he can get out of it. The original cost is an insignificant item compared. I will tell more about this when I get to running the pit next winter.

THE USEFUL TOAD.—Let me remind those whose hot-bed or cold-frames at this time are troubled with insects or worms of any kind, that the most effective insecticide is a live toad. A few specimens are easily picked up any nice, warm evening. Put one or two in each hot-bed and see the insects disappear. I have used these insect destroyers with entire success and satisfaction for several years.

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Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

STRAWBERRIES.

Success in strawberry growing depends very much upon the knowledge and skill of the operator and the application of that knowledge to a practical purpose. It is well known by all intelligent strawberry growers that many of the most productive and profitable varieties have imperfect blossoms, producing no pollen to fertilize the embryo fruit bud; hence, unless perfect blossoming varieties are planted near them, they fail to produce a crop of fruit. The Haverland, Bubach No. 5, Warfield, Mrs. Cleveland, Windsor Chief, Eureka, Crescent Seedling and Manchester are all "pistillate," or imperfect blossoming varieties; yet, when planted near the best "staminate," or perfect blossoming varieties, they are the most reliable and productive we have found in our thirty-three years of experience in strawberry growing for commercial purposes.

Our first strawberry patch grown for market was planted in 1857, and comprised Hovey's Seedling, Burr's New Pine, Longworth's Prolific and Crimson Cone. Since that time we have tested almost all the new varieties as they have been originated and introduced.

As a hardy, productive and profitable variety for market, the Crescent Seedling has perhaps never been surpassed by any other variety until the advent of Bubach No. 5, Haverland and Warfield (as pistillate varieties); but now we regard these newer varieties as fully equal to Crescent in productiveness, while they far surpass it in size, appearance and quality. But in order to be successful in growing these varieties, it is absolutely essential that the best bi-sexual or perfect blossoming varieties be planted near them. For this purpose, we plant Wilson, Charles Downing, Sucker State, Michael's Early, Crawford, Miuer's Prolific, Cumberland and others.

Some growers regard the Jessie as one of the best pollenizers; but with us it fails to yield a satisfactory crop of fruit, while Wilson, Michael's Early and other varieties appear to answer the purpose quite as well, and are productive and profitable. The Jessie is a vigorous and healthy grower, and produces an abundance of pollen, but its failure to produce a crop of perfect fruit leads me to suspect that it fails even to properly fertilize its own embryo fruit buds; hence, we shall plant it this year alongside of some good staminate variety and note the result.

There is much more of importance and also of mystery connected with the proper fertilization of fruit buds than many people are aware of or willing to believe. My observation and experience has convinced me that some varieties of raspberries are defective in blossom, and need other varieties near them in order to fertilize the fruit bud. The same is true of apples, and especially so of plums. Some varieties of the Chickasaw, or Wild Goose plum, appear to be entirely devoid of stamens or pollen. Hence, although they bloom profusely, they fail to produce fruit. A single stalk of corn, grown in a potato patch or any place isolated from any other corn, will not fertilize its own silk or ever produce a perfect ear, although the "tassel" may be well developed.

In order to demonstrate, beyond the possibility of a doubt, what can be accomplished by cross fertilization, I last year planted four distinct varieties of corn (two of sweet and two field corn) in close proximity to each other. The result is that I have four varieties of corn on one cob, produced by cross fertilization in one year.

Many strawberry growers recommend the planting of half a dozen rows of a pistillate variety, then a row or two of some staminate or perfect blossoming variety; but I am decidedly convinced, from personal observation and experience, that this is placing them too far apart. Hence, we plant two rows of pistillate, alternated with two of staminate, all through the patch.

To depend upon the wind to carry the pollen across half a dozen rows, three and a half feet apart, is very uncertain. Many suppose that bees and other insects will carry the pollen from flower to flower; but this is also very uncertain, as in some seasons the bees do not work a strawberry patch.

A strawberry field is not especially

valuable as a bee pasture. The truth is that a great share of the pollen falls within a very few feet of the plant producing it; hence, we prefer to have the imperfect blossoming varieties no farther from the others than across a single row.

"What is worth doing is worth doing well." When crating the fruit, each variety should be kept separate; mixed berries do not sell well in market. This can be just as easily done when rows are planted two and two, as if farther apart. If we wish to plant more of pistillate than of staminate varieties, as we generally do, then plant two rows of pistillate, alternate with one of staminate. F. R. PALMER.

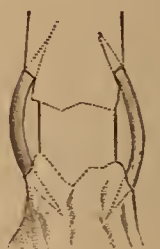
Richland county, Ohio.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Girdled Trees.—M. O. L., Brenner, Kas., writes: "Is there anything that will save an apple tree after it has been girdled by the rabbits?"

REPLY:—If the girdle does not go entirely around the tree, the wound will heal if covered with a cloth grafting, wax or clay. If it goes entirely around the tree and through the inner bark, the wound may be bridged with scions as shown in accompanying figures.



After putting in the scion the whole wound and ends of the scions should be covered with grafting wax or clay. Now, the necessity of bridging such wounds results from the fact that growth takes place almost entirely from the outer surface of the sapwood and the inner surface of the bark. The refined sap, which is the sap that furnishes the material for growth, comes from the leaves between the sapwood and bark and cannot pass over open spaces on the trunk. The consequences is that girdles heal entirely from above and not from below. The crude or raw sap passes up in the sapwood to the leaves, where it is refined and supplemented by the gases the leaves take from the air, and is made into refined sap.

Fungus on Raspberries.—J. D. H., Hupp, Va. Probably they were attacked by some fungus growth, nearly allied to the rust of wheat. I think it would be a good plan to burn every remnant of the stems, and plant a new bed, remote from the diseased one, with plants known to be healthy. Some varieties are more subject to blight than others. The Souhegan and Nemaha are both very healthy, black varieties, but may become diseased.

Brighton Grapes not Productive.—J. W., Washington county, Oregon. The Brighton grape produces but a small amount of pollen, and its flowers seem to be more readily fertilized with pollen from some strongly staminate kinds than with its own pollen. You can remove the difficulty by planting near by a few vines of such varieties as Concord or Worden, or any of the perfect flowered kinds. Probably one Concord to ten Brighton, which were near, would be enough. Yours is a common complaint where the Brighton is planted by itself, away from other varieties.

Hot-house Grapes.—T. E. C., Derby, Wyo., writes: "I want to grow grapes in a hot-house,

size, 16x40 feet, 9 feet high. Will it be necessary to have side glass, or will roof of glass do? How many vines should I set, and what time in season is best to set them?"

REPLY:—I suppose your grapery roof slopes to the south from a nine-foot wall, and that the wall is not over four feet high on the south. In such a case it would not be absolutely necessary to have glass on the south side; but I would prefer to have two feet of glass there. If the wall is any higher, you should have some glass in the south side. The vines should be put about four feet apart on the south side. This will probably make one vine to each rafter, and is a convenient way to train them.

Honey Locust Seedlings.—C. B., Jordan, N. Y. The seeds may be sown as soon as gathered, or be mixed with moist sand and buried in the open ground and then sown in the spring. If the seeds are kept dry over winter, they should be scalded or steeped in warm water for a day or two and then be kept moist in a warm place in the house until the sprouts appear, before sowing them. If they do not start in a warm place in the house, they will not start in the open ground. The plants should be grown two years in the nursery before being set for a hedge.

Growth of Trees.—G. W. H., Opekiska, W. Va., writes: "Do the limbs of a tree move up as the tree grows taller; that is, if a limb puts out four feet from the ground, will the limb ever get any higher from the ground as the tree grows taller?"

REPLY:—The center of a branch always remains the same, or nearly the same distance from the ground. There is often (especially on hard soils) a slight elevation of the branch, due to the forming of large roots, which, as

they grow, force up the tree somewhat, but the stem does not elongate except at the terminal bud, for no growth at all takes place in the heart wood, as it is nearly the same as dead wood.

Worms on Grape Vines.—P. P., New Orleans, La., writes: "Could you kindly inform me how to destroy caterpillars that infest the leaves of my grape vines. They are about 1/4 to 1/2 inches in length and make their appearance annually. In consequence of their destructiveness of the leaves, the fruit is ruined. I have tried picking them off the leaves when making their first appearance, but they multiply too rapidly to make this method effective."

REPLY:—I cannot tell from your description what the worm is that troubles your grapes, but a good remedy for all these foliage-eating pests is effected by syringing the foliage with Paris green and water, in the proportion of a teaspoonful to two gallons, or use powdered hellebore in water in the proportion of one ounce to two gallons of water. This should be put on in the evening or in early morning, or else it may spot the foliage. It will not injure the fruit for eating if not used for two weeks before the fruit is ripe.

Pears.—J. H. S., Peale, Pa., writes: (1) "What varieties of pears would be best for our dry, sandy soil?" (2) I find that apple trees do best taken up in the fall, the roots well mossed, and stored away till spring. Will the same method apply to pear trees? (3) Is the Golden Russet of any decided merit over the old standard varieties? (4) Are pears as apt to be attacked by borers as apple trees? (5) Is the Swinks Wondrous peach any harder than the common varieties? (6) What peach is the best for our high land and cold and persistent winters?"

REPLY:—(1) Probably the best pears for you to experiment with are Keiffer, Bartlett, Anjou, Lawrence, Seckel and Flemish Beauty. They all need a rich soil. (2) Yes. The same holds true with all trees. (3) Do not know. (4) They are not so generally attacked by borers as apple trees, and yet they are by no means exempt from them. (5, 6) If peach trees are as uncertain as you write, you had better practice protecting them during the winter by bending them in the root and covering with soil or cornstalks.

INSECTS ON FRUIT TREES

Can be destroyed by spraying with London Purple. Diseases of grape vines can be checked by spraying with Bordeaux mixture. The Field Force Pump Co., of Lockport, N. Y., manufacture the Knapsack Sprayer and a full line of Orchard and Vineyard Outfits. Write them for circulars and directions.

\$17 Spraying Outfit \$5.50
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In use over 40 YEARS in one family.

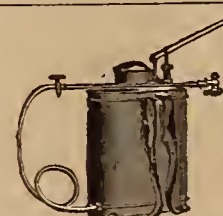
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Every Sufferer From Rheumatism, Sciatica, Neuralgia, Nervous Headache, Diphtheria, Coughs, Catarrh, Bronchitis, Asthma, Cholera Morbus, Diarrhoea, Lameness, Soreness in Body or Limbs, Stiff Joints or Strains, will find in this old Anodyne relief and speedy cure. Pamphlet free. Sold everywhere. Price 35 cts. by mail, 6 bottles, Express paid, \$2. L. S. JOHNSON & CO., BOSTON, MASS.

10 Pkts. Flower Seeds, 10c. 5 Pkts. Vegetable Seeds, 10c. Cat. Free. J. J. BELL, Windsor, N. Y.

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For the protection of Cabbage, Squash, Cucumbers, in fact all vegetation from destructive insects. Contains no poison. Price by mail 25c. Stamps accepted. Friend Medicine Co., Gresham, Neb.



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Wormy Fruit and Leaf Blight of Apples, Pears, Cherries, Plum Curculia prevented by spraying with the **EXCELSIOR SPRAY PUMP**. GRAPE and POTATO ROT prevented by using **EXCELSIOR KNAPSACK SPRAYER**; also injurious insects which infest Currants Gooseberries, Raspberries and Strawberries. **PERFECT FRUIT ALWAYS SELLS AT GOOD PRICES.**

Catalogue showing all injurious insects to fruits mailed free. Large stock of Fruit Trees, Vines and Berry Plants at **Bottom Prices.**

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EXTRACTS
FROM CORRESPONDENCE.

FROM NEBRASKA.—We live on the south fork of the Elkhorn river, where it runs through the Pawnee meadows. The land is a black, sandy soil and very fertile. Times are hard here, but farmers who are workers and have any business about them are doing well. There are several thousand head of steers wintering around here. We have been here eight years and like it ever so well.

Chamber, Neb.

B. F. H.

FROM MICHIGAN.—Missaukee county is about the best country for men of moderate means. It has strong soil, sure crops, abundance of timber, running streams, pure water, ready markets and good schools. Manton is a lively town of about 1,000 inhabitants, situated on the great north and south line of the Grand Rapids and Indiana railroad. All kinds of small fruits grow here in abundance. Timber lands range from \$5 to \$10 per acre, and partly improved farms can be had from \$15 to \$30 per acre.

Manton, Mich.

W. V. C.

FROM UTAH.—Washington county is one of the rockiest counties of Utah. It has been settled about thirty-three years. The principal crops are fruits, hay and grain. We have a mild climate; sometimes the winters are cold, but as a general rule it is very mild. It gets pretty warm in the summer, but most all the inhabitants go up in the mountains to dairy. Cattle raising is an important industry here. They are taken to the mountains in the summer and brought back to the valley in the winter. This county is about sixty miles long and about forty miles wide. It is watered by the Rio Virgin and the Santa Clara rivers.

Virgin City, Utah.

J. L. W.

FROM VIRGINIA.—Mecklenburg county is in the southern part of the state. It has good lands lying along the Meherrin and Roanoke rivers. We have some deposits of coal. We also have as fine timber lands as there are in the South. We are having settlers from other portions of the state, and also from other states. We expect to establish a Scotch colony here. We grow grass, oats, wheat, corn and other forage crops, and have very fine tobacco lands. Tobacco is very extensively grown here. We have mineral water, both wells and springs, the waters of which are highly recommended in the cure of dyspepsia, indigestion, etc.

Drapersville, Va.

W. A. G.

FROM MISSOURI.—Holden is a town of about 3,000 inhabitants, and has electric lights, water works, ten good churches, three public school buildings, two large colleges and two railroads. All the religious denominations are well represented here. Johnson county is a great grain and stock-producing county. The prospect for wheat is fine, owing to the mild winter in this part of the state. Corn is 45 cents per bushel; wheat, 90c; potatoes, \$1.35; eggs, 12½ cents per dozen; and butter, 20 cents per pound. This is a fine country, and anyone that is industrious and willing to work can make a good living here. Land is worth from \$30 to \$50 per acre. We have a fine climate and good water, and many other things to be thankful for.

Holden, Mo.

B. R.

FROM TEXAS.—Montague county, in the north-eastern part of Texas, is generally rough, although there are some level and rich plains and creek bottoms. Apples, peaches and plums do well here. Small fruits have been planted but little yet. Vegetables and melons do well. Cotton, corn, oats, wheat, Irish and sweet potatoes all yield heavy crops. We have two railroads and will soon have the third. Water is good and plentiful from 18 to 100 feet deep, some soft and some hard. Land ranges in price from \$8 to \$15 per acre, according to location, fertility and improvements. This county is on a boom. We want more capital, more men of enterprise, more practical farmers and more fruit and poultry raisers. To all such we extend the invitation to come to the country where we have but little snow, no cyclones, no blizzards and no extremes of heat or cold.

Uz, Texas.

Mrs. A. M. P.

FROM IOWA.—Winnebago county has had good crops for the past few years, with the exception of the wheat crop. Oats yield from 40 to 50 bushels per acre; corn, from 30 to 50; rye, 15 to 25; flax, 10 to 15; timothy, 8 to 10; clover, 3 to 8. Flax is the principal money crop; nearly all the farmers sow from 20 to 60 acres. Grain prices are good, but the livestock market is low. Wages for farm hands are medium. The climate of this county is healthy. The county is watered by the Upper Iowa and Turkey rivers and many small creeks. We have the best of drinking water, as our subsoil is limestone. Decorah, our county seat, is located in the center of the county, on the Upper Iowa river. It has about 5,000 population. Land is worth from \$15 to \$30 per acre. We have a good demand for horses and cattle. Horses sell at from \$75 to \$125. Our cattle are most all graded Short-horns and Holsteins. The best time to come here is in the fall.

Ridgeway, Iowa.

W. A. G.

FROM WEST VIRGINIA.—The soil of Barbour county is fertile in most places. The corn and

oat crops were almost failures last year. Corn is now selling for 75 cents per bushel, and oats 50 cents per bushel. This and adjoining counties are hilly, but are well adapted to grazing and fruit growing. Coal is abundant. Iron ore has been found in large quantities, but as yet nothing has been done toward developing it. Timber, such as oak, poplar, chestnut, walnut, hickory, etc., is plentiful. Fruits of all kinds are raised, but were an entire failure last year, owing to severe freezes. We have a good, free school system, good school houses and good churches. Our high school building is situated at Phillipi, the county seat. We have good water. Land is worth from \$3 to \$25 per acre, according to location. A great many potatoes are raised, which find a ready market at from \$1 to \$1.20 per bushel. Sheep raising pays well; good sheep bring from \$4 to \$10. The winters are long and sometimes severe. One heavy snow fell this winter, nineteen inches in depth. Farmers' alliances have been organized in some parts of the county. Farm laborers receive 50 to 75 cents per day; carpenters, \$1 to \$1.25.

Meadowville, W. Va.

H. G. J.

FROM COLORADO.—Potatoes are a hard crop to raise here, unless a person is up to his mark. I suppose you are all aware that we farm here by irrigation. Potatoes have to be irrigated to start them up, and if the ground gets too wet, the potato set rots. If allowed to go too long without water after the potatoes begin to form, it stunts the potato, and by watering forms another potato on the former one, and so on till perhaps three or four potatoes cling to one potato. If too much water is used, the potato becomes watery. But a potato field, properly irrigated, will turn out a large crop of good, uniform potatoes. I have known one acre to yield 51,000 pounds of good, marketable potatoes. I have seen a potato that weighed twelve pounds and one ounce, and I have raised many that weighed from two to six pounds.

Parachute, Colo.

C. M. R.

FROM MISSOURI.—Clay county has a population of 19,856; Liberty, the county seat, has about 3,200. Three railroads run through our county. This county has great educational advantages—William Jewell college, at Liberty, which has about 250 students, and the Liberty Female College. Our principal farm products are corn, wheat, hay, oats and potatoes. All kinds of grain and feed are high, and stock of all kinds is very low, especially hogs. We had a very mild winter here, and winter wheat looks promising, although it is thought the Hessian fly has done considerable damage in some places. Farm hands get \$15 to \$20 per month and board. The farmers' alliances are well organized here, and they elected a farmer to represent them in the legislature. Land ranges in price from \$15 to \$50 per acre, according to location and improvements. This is a very good fruit country, especially for apples. All kinds of berries do well, also grapes. We have good markets. We are only about sixteen miles from the great metropolis of the south-west—Kansas City. Our drawbacks are high rents and bad roads generally.

Missouri City, Mo.

J. W. M.

FROM ILLINOIS.—Adams county is adapted to the various agricultural products that are raised in this latitude. We have a subsoil that is equal to any and surpassed by no other section of country; nevertheless the farmers generally keep the thin spots up by manuring and clovering. No soil can keep its virgin strength with constant cropping, which of necessity saps a certain amount of fertility of every crop grown thereon. This climate is more partial to the small grains, namely: Wheat, oats, rye and corn. In the last five years gardening and fruit culture have been great industries and large profits have been derived therefrom. The future promises greater results than ever. The farmer, slowly but surely, is getting his eyes open to the fact that it pays to devote some attention to the lesser sorts of fruits, especially the berry variety. A man with an eye to economy can undoubtedly see the many benefits to be derived from raising and canning his own fruits, to say nothing about the revenue brought in from any marketable surplus that could easily be grown.

Richfield, Ill.

J. C. B.

FROM NORTHERN CALIFORNIA.—Cottonwood valley has an elevation of 500 feet above the sea level. It is drained by Cottonwood creek, which is fifty miles long. It rises in the Coast Range mountains, flows east, forming the county line between Shasta and Tehama counties and empties into the Sacramento river. Twenty earloads of young fruit trees have been set out in this valley in the last four months, and the season for planting orchards will continue through this month of March. The winter season here is similar to spring in the eastern states. The thermometer never goes lower than 24° above zero. Green grass is everywhere. Horses, cattle, sheep and hogs feed on the ranges the year round without shelter or attention. Many orchard trees are in bloom; also the evergreen shrubs, and manzanitas, which resemble rose bushes in full bloom. Twenty inches of rain have fallen so far this season, or just half the annual average, hence twenty inches more may reasonably be expected. Kern county, in the south end of this state, has only an annual average rainfall of four inches, hence they re-

sort to irrigation. Crops in Cottonwood valley have never failed, and owing to our abundance of rain, probably never will.

Cottonwood, Cal.

M. G.

FROM SOUTHERN OREGON.—Until one has seen Oregon in early spring, he is unable to comprehend the fullest possibilities of wild flower effects. Spring beauties, buttercups, deers' tongues, cats' ears, reg-dogwood, honeysuckle, Henderson irls, ceanothus, Oregon grape and a host of others follow in rapid succession. Old wheat is nearly all gone, as last year's crop was light. Seventy-five cents per bushel is asked and obtained for good wheat; oats, 60 cents; corn, 50 to 60 cents; apples, 60 cents to \$1 per bushel; eggs, 15 cents per dozen; butter, 25 cents per pound; horses, from \$75 to \$125 for good ones; cows, from \$20 to \$30; hogs, 2½ to 3 cents for stockers; stock cattle are low, but advancing as the grass grows; bacon, 10 to 12½ cents per pound; sugar, 7½ to 9 cents. There is a vast fund of reliable, official literature descriptive of every county west of the Rockies. Any county official will gladly furnish it if sufficient postage is enclosed. Land is not high here, except near town. A few miles from the railroad good land can be had at from \$10 to \$20 per acre. A few small foot-hill claims can yet be secured, but one should have a year's living ahead to open one of these. We have room for many people. We have to offer a mild, equable climate, good lands at fair prices, fair markets at some time during the year for farm crops, fair school and church privileges and a cordial welcome. If you want the earth for "two bits," stay where you are. It takes work here to run a farm, as well as money to buy it. The day for getting a big farm from Uncle Sam is gone. You may get a small one well adapted to fruit growing and poultry raising. These will all be taken very soon.

Spikenard, Oregon.

S. M.

FROM NEBRASKA.—Work was commenced here last November on what is to be the largest beet sugar factory in the world, costing, I believe, \$750,000. It will be completed about the first of October, ready for this year's crop of beets. The Oxnard company furnish for the use of farmers all the latest machinery needed in raising beets, also the beet seed. The latter the farmer pays for, but as it is sold for less than wholesale prices charged for beets, he ought not to grumble. I see in our late paper that four car-loads of sugar beet seed for use here are now en route from Germany. A crop of sugar beets yields from ten to twenty tons per acre, according to the year. They are worth, delivered at the factory, from \$3.50 to \$5 per ton, according to the amount of sugar the beets contain. Improved land in this vicinity sells for from \$15 to \$40 per acre, according to quality and distance from the city. Lands near the factory are said to be renting for from \$4 to \$6 per acre. It will be largely an experiment with us this year, but for farmers with large families who take hold of it, it cannot help being a success, as the work is light, and a large part of it can be done by children. The soil here is adapted to raising all kinds of garden produce, and it is said by experts who have made tests of the soil that it is better adapted to the culture of sugar beets than any part of the state. Of course, no one can make a success of raising beets without hard work, no more than they can in market gardening. I never knew a successful gardener who was a lazy man, but I have known general farmers to "get along" who milked their cows when they thought of it, and moved their stables instead of cleaning them. But do you suppose these men will raise beets? Not they; business would take them to town before they were through with one row. But generally speaking, our farmers are glad to diversify their crops, and I think our new enterprise will furnish a good living for many who have only money to buy a few acres and desire a sure market for what they may raise.

Norfolk, Neb.

Mrs. L. A. T.

FROM VIRGINIA.—Pulaski county is situated in south-western Virginia. It is nearly encircled by a chain of mountains, which are broken at several points to let the rapidly-flowing New river pass on to the great Kanawha. It is a very small county, but abounds in wealth. One can stand on the dome of the courthouse, at Newbern, the county seat, and almost follow the boundary lines on top of the mountains that separate it from the adjoining counties. Newbern is situated near the center of the county, on a slight elevation, from which point the county presents itself to the eye as a large basin. It is well watered by New river and its tributaries. Most every farm is supplied with springs of pure water. The famous alum springs are situated in this county. It is a fine grass and grain producing county, and the southern portion produces a high grade of smoking and manufacturing tobacco. The horses, cattle, sheep and hogs that enjoy the tall clover, timothy and orchard grass, are thoroughbred and high grade. The Percheron horse, the Shorthorn steer, the Southdown sheep and the Poland China hog have long since forbid the native scrub to cross over the mountains into their fields. Dublin is the banner depot in south-west Virginia for stock shipping. A great many cattle, sheep and hogs are shipped from this point. The cattle, sheep and lambs are mostly shipped to New York City. Cattle are not paying so well now, and the farmers are engaging in the sheep industry. Lambs are sold for five and six cents a pound when five months old, and

they weigh from eighty to one hundred pounds gross. The mountains surrounding this county are covered with magnificent trees of various kinds, suitable for building purposes, and beneath the soil on those mountains are iron, zinc and coal that are being dug from their beds, where for ages they have rested undisturbed. Our mountains are proving more valuable than our valleys. Northern capitalists are investing heavily and putting up furnaces and working the raw material in our own county. Our people are kind and social and desirous of the North to come and help us make this a great country. Our taxes are not burdensome, though our state is in debt. State tax is forty cents on the one hundred dollars; county and district taxes are raised according to the demand; but we are well supplied with new school houses, which will lessen our school tax. We have a good school system. Our population is 12,790, of which about 3,000 are colored. The personal property of the county, in 1890, was assessed at \$974,643. This county is 2,000 feet above tide-water, which insures a delightful climate, winter and summer.

Snowville, Va.

T. W. C.

FROM ARIZONA.—We certainly have the finest winter climate in the known world. For consumptives and those suffering with asthma or rheumatism, I believe it is a sure cure if they will come in time. Our legislature has just passed a bill exempting from all taxation for a period of twenty years, any party or corporation who will build a railroad or railroads in Arizona. Phoenix, the capital, has a population of between 6,000 and 7,000, and is beautifully situated one and one half miles from the Salt river and thirty-four miles from the Southern Pacific railroad, with which it is connected by a branch road running to Phoenix from Maricopa station. We have no chills, fever or malaria. Our air is dry and pure, and the surrounding desert helps to keep it so by the heat arising daily from it. Our summers are hot, but it is a dry heat, not that moist, suffocating heat I used to experience back East. 112° here corresponds to about 90° in Baltimore, Philadelphia, New York and Chicago. There are no sun-strokes here. People who indulge in strong drink and who are always under the influence of it, sometimes are overcome with heat when they attempt to work in the sun, but no others. People work out every day in the year without a coat. The harvest commences May 15 and ends July 4, the yield being 10 to 25 sacks of wheat and 15 to 30 of barley. The alfalfa produces from one to two tons of hay per acre, and often gives four to six crops per season; the first crop is cut in April, and cutting is continued until November first, and I have seen the farmers cut the last crop in December. It is very nutritious, and horses, cattle and hogs keep fat on it. Our fruit is going to be the leading industry, as all kinds can be raised here. The apple, pear, peach, plum, pomegranate, apricot, uectarines, quinces, oranges, lemons, limes, loquat, figs, prunes, almonds, dates and grapes do well. This is the natural home of the grape, fig, pomegranate, pear, peach, apricot and date. Many acres are being planted out this season in oranges. Nearly all of our fruits mature from four to six weeks earlier than they do in California, which gives our valley quite an advantage. Our hills and mountains contain gold and silver. Our cattle business is in a thriving condition, and the ranges are full, feeding and fattening on alfalfa, gramma and other grasses. California is our best market. Hundreds of ear-loads of hogs, cattle and hay are shipped there every year. The water for irrigation is taken from the Salt river by canals, the principal ones being the Arizona, 41 miles long; Grand, 22 miles; Maricopa, 14; Salt River Valley, 18; Tempe, 19; Mesa, 9; Utah, 6; Highland, 22 miles. Our schools and buildings are our pride, and are second to none. We have good teachers, who get from \$65 to \$125 per month; but it is exceedingly difficult to keep teachers for the majority only teach one or two terms before they leave us for another state—the married state. Our churches are good, substantial buildings. We have the Methodist, Presbyterian, Baptist, Christian, Episcopal, Catholic, and services are often held by other denominations. We never have snow in the valley, but can see it on the distant mountains. We have rain often, but not during harvest; have had ice on standing water a few nights, one eighth to one fourth inch, which disappears as soon as the sun comes up. The prices of dry goods, groceries, etc., are a little higher than in the East. Flour \$2.25 to \$3 per 100 pounds; sugar, best granulated, 10 to 12 cents; horses, \$25 to \$150; cows, from \$25 to \$100. Wages of common laborers, \$25 to \$35 per month; carpenters, \$3 to \$4.50 per day; brick layers, \$4 to \$6; servants, \$20 to \$30 per month, and scarce at that. There is no government land near Phoenix. There are parties who sell relinquishments to government land. Lands near Phoenix are held from \$100 to \$250 per acre. Lands four to fifteen miles distant range from \$10 to \$50. Good land for all purposes can be bought for \$20 to \$25 per acre, including water. This is the country for the honey bee, as they are at work every day in the year, making delicious honey from alfalfa, mesquite, iron wood and other flowers, which sells for A No. 1 in the markets of the East. We have a variety of soil, ranging from the black adobe to the finest sandy loam. Land always has an upward tendency in all irrigating countries, as people do not have to depend on rain for crops. You can turn on the water whenever you need it, and can raise twice and often three times as much on the same land as you can back East.

Phoenix, Arizona.

Mrs. W. E. T.

EARLY FRUITS AND VEGETABLES.

C. W. Fillek & Co., Springfield, O., wholesale dealers in southern Fruits, Vegetables, Apples, Potatoes, Beans, Berries, Cabbage, Butter, Eggs, Corn, Oats, etc. Write us. Consignments solicited.

FOR SALE FARMS worth \$4,000.00 for \$1,000.00, owing to crop failure, that in good seasons raise 40 bushels of wheat and 50 bushels of corn per acre. Descriptive list 10 cents. Chas. R. Woolley, Osborne, Kansas.

Our Fireside.

VENUS.

[On the picture of Venus, recently painted by Mr. Barne Jones, of London.]

Pallid with too much longing,
White with passion and prayer,
Goddess of love and beauty,
She sits in the picture there—

Sits, with her dark eyes seeking
Something more subtle still
Than the old delights of loving
Her measureless days to fill.

She has loved and been loved so often,
In the long immortal pride,
That she tires of the worn-out rapture,
Sickens of hopes and fears.

Nor joys nor sorrows move her—
Gone is her ancient pride,
For her head she found too heavy
The crown she has cast aside.

Clothed in her scarlet splendor,
Bright with her glory of hair,
Sad that she is not mortal—
Eternally sad and fair—

Longing for joys she knows not,
Athirst with a vain desire,
There she sits in the picture,
Daughter of foam and fire.

—Louise Chandler Moulton, in the Athenæum.

SISTERS, BUT NO KIN.

BY MARY TWOMBLY.

CHAPTER IV.



ESTHER did not tell her grandmother about Mrs. "Bob's" invitation to Almeda Poore to visit her, and this was from no deceit-

ful impulse. To speak, she knew, would only precipitate her grandmother's displeasure without altering one whit Mrs. Bob's intention.

The younger and the older Mrs. Reignolds never came to any open breach of good-will; they understood each other too well for that. When the older woman put forth certain opinions as laws to be obeyed, the younger one never took the trouble to oppose them; she merely dissolved them in an open fire of railery, and then did as her own inclination prompted. Her impulses were apt to be kindly, though sometimes unwise, and on more than one occasion her favor had been as capricious as an April day. But for all that her sympathies were often strong and far-reaching, and her generosity large. Her faults arose from the caprices of one over-favored by fortune.

Esther had learned, ere this, that her grandmamma did not approve of certain persons her daughter-in-law was fond of having at her house, and one of the latest of these was Ralph Cazenove. The old lady brought no positive charge against the young man, but had intimated to her granddaughter that she preferred she would not cultivate his acquaintance. The latter asked no questions, but said she would endeavor to be merely civil to him when they met.

"I do wish your Aunt Florence would be more choice in the matter of her acquaintances," began Madam Reignold at breakfast the next morning.

"I don't understand why you think she isn't, grandmamma," answered Esther. "It seems to me she is generally careful to have only interesting people at her house."

"Interesting people! But one like Florence should ask for and get more than that. A man may be interesting in some ways, yet be as poor as a pauper. A man may be wealthy as Cæsar and lack nothing that can make him interesting. Florence should demand everything in the men she admits to her house."

"It seems to me that is what she does demand and get. One meets no greater variety anywhere else. She can afford to be independent and not exclude people for merely mercenary or other equally meretricious reasons. At certain houses where they do that, stupidity is apt to reign, and anyone that Aunt Florence receives, I notice, other people are glad to take up."

"Did any one dine with you last evening beside your aunt and uncle?"

"Oh, yes; a Dr. Ashmead, from New York, and Mr. Cazenove; and as we were about to leave table, Mr. Alton dropped in."

"What a combination to dine *en famille*. I can imagine what Frank Alton thought of it."

"So could we all from the attempt he made to be sarcastic and cavalier in manner."

"Attempt? Mr. Alton is not in the habit of attempting what he does not carry out."

"He did last evening, however, for he undertook to patronize Mr. Cazenove, and made a very bad failure."

"My dear child, what nonsense! Mr. Alton

is in a position to command anything. Mr. Cazenove is only in a position to palut an order."

Esther bit her lip and did not reply.

"I am afraid you do not appreciate Mr. Alton," pursued her grandmother.

"I dislike him," said Esther.

"I am sorry for that. I know of no man of whom I think more highly. I wonder if this Dr. Ashmead is the son of my old friend, Elinor Pratt, who married an Ashmead, of New York. If so, he comes of excellent family. What is he like?"

"A rather handsome man, with clear, dark complexion, rather sad, dark eyes that have, at the same time, a penetrative quality that is almost disconcerting."

"So had his mother. Is he interesting?"

"Yes, with the easy, ready, agreeable manner of a man of the world."

"I will invite him here, Esther."

"You must wait till his return, grandmamma; he leaves for New York to-morrow."

"Did you have any talk with Mr. Cazenove, Esther?"

"Only a few words of the merest commonplace. Why do you disapprove of him, grandmamma? Did you ever hear of his family, or is he quite unknown?"

Madam Reignold did not notice the irony in Esther's voice as she put this question, and replied quickly, and in all seriousness:

"Not at all unknown. His family was of

"I could not have done that, Esther, never," she said. "It seemed an impossible thing for a daughter of mine to do. Remember that, child, and let it guide all your conduct. I could forgive neither child nor grandchild that disgraced her family. I left her to God to deal with. You know how she was punished." "Grandmother," cried Esther, her face ablaze, "how can you range God on the side of the mere worldly-made distinctions you prize so highly? Circumstances, not God, punished my mother. I can hear no more." And she rushed from the room.

CHAPTER V.

"Come over at once, Esther. I am much in need of you. In haste. AUNT FLORENCE."

Esther hurried over and found Mrs. "Bob" in an almost hysterical state between mirth and consternation.

"My dear," she cried. "She has come and I don't know what on earth to do with her. The poor child has evidently made an immense effort to get herself up bravely for the occasion with the result that she looks like a fright. I must get her something to wear at once, and want you to help me out; pray go to her."

Esther made her way to the guest chamber and knocked. The door was partially open and she saw Almeda nervously beating a tattoo on the window-pane as she gazed wonderingly up and down the broad, beautiful ex-

feelin's; it's only natural you should have some feelin' for her, I s'pose. But the mint I got that note from yer aunt I made up my mind you was at the bottom of her sendin' it. I made up my mind right off I'd come, if only out o' spite. But now that I'm here I don't know as I want to stay. I don't seem to like Boston much; seems as if you never could make free with nothin' or nobody."

"Oh, you'll get over all that," said Esther with reassuring good humor. "The city does, no doubt, look large and strange to you just now, but you'll get used to it, and the people you will find just as warm-hearted as any you ever saw, after you know them."

"Oh, I don't doubt it; your aunt seems's if she wanted to be as kind as ever was, but all the time there's a kind o' stand-off about her kindness. Things are splendid here, but seems as if they never could be homesy. Honest, now, Esther, do you feel at home?"

"Why, you silly child," laughed Esther, "of course I do; it is all in use. You'd get used to it in a very short time. And now, Almeda, unpack your things and let me see them. I know how it is in the country, you know, and of course there are things you couldn't have got ten before you came here. I have a host of stuff that I can just as well share with you, and anything else you may want we can have made right away."

"Very well," said Almeda, rising with alacrity, shaking out her skirts and wheeling round and round for Esther's inspection. "We've improved some in style up to Ridgeville since you left, don't you think so, Esther? We've got a new dressmaker up there and all she wants is the right sort o' goods to get things up about as fetchin' as they make 'em. What do you think o' this?" she asked, displaying the woolen gown she wore, a pale heliotrope shade from which yards upon yards of narrow ribbon depended, bowed, looped and streaming in divers directions.

Esther evaded the expected reply, and looking at the glowingly fairface of the girl said: "You look very pretty in it, Almeda, only I ought to tell you that according to city standards, it is not the proper thing to travel in; it is too light in color and entirely too dressily trimmed."

"All right, you ought to know, of course; I'll put myself in your hands as far as dress goes," acquiesced Almeda, who, won by Esther's familiar manner of approach, made up her mind at once to be amiable. Then they fell to unpacking the trunk together, and in the space of a quarter of an hour Esther had taken an inventory of Almeda's belongings and decided upon the needful things she must have. Then she hastened home to acquaint Madam Reignold with what had happened. Consternation sat upon that lady's countenance when she heard the story. Then she summoned all her dignity while she spoke. "I do not hold you accountable for this, Esther; you tell me you did not suggest it by word or even thought; that is sufficient. Under the circumstances, past and present, it would not be the conduct of a lady should you ignore the girl. You have my permission to go to your Aunt Florence's and be civil to her, but in no way be responsible for bringing her into public view. Should Florence carry her jocose vagary so far as that, on her alone let the odium rest. I regret to use such a word, but the action is odious. For my part I keep to the stand I have first taken; the girl does not cross my threshold."

Esther was, on the whole, satisfied with this arrangement and thankful that her grandmother's wrath was under sufficient control to allow her to treat Almeda with proper courtesy. Left to herself she never would have longed for Almeda's society to the extent of asking her to town. Whatever intimacy had ever existed between them had been a matter of chance, not choice. No two girls could be more different in temperament or tastes. Left to the freedom of common choice, no law of gravitation would ever have drawn them into close intimacy. And yet Esther would have done anything in her power to make Almeda happy or in any way further her interests.

After luncheon Esther took Almeda down town shopping. It was the season for shopping and everybody seemed to be out. The crowds on Washington street and the crush in all the big dry goods stores quite suited Almeda. She said it seemed to her as good as Fourth of July. In the afternoon Esther took her own little pony phaeton and drove her out



old, excellent stock—French Huguenots—like the Fanenils and Bawdoins and others, than whom none were better. I'm sure I don't know how it happened that in the last generation or two they seem to have dwindled out, disappeared."

"Thank you for telling me this, grandmamma. I find him a very interesting man. Now I feel I can talk with him without fear of contamination."

Esther had eaten very little that morning, and had been playing with her cup of coffee the last few minutes. As she finished speaking, she rose to leave the table.

"Esther?"

"What is it, grandmamma?"

"Is it possible you are mocking me, child?"

"I hope that will never happen, grandmamma."

"If you think me hard or over-anxious, child, think of your mother."

"I often do, and the thought is painful, grandmamma."

"How much more so must it be to me, Esther?"

"I dare say, grandmamma, you might have made it all so different had you condoned her fault."

A cry from Madam Reignold made Esther turn to see her grandmother weeping; but the lines of her face were as unyielding as ever.

pense of Commonwealth avenue. A staunch-looking trunk, in a half unpacked condition, stood in the middle of the handsomely appointed room. On hearing the knock, Almeda gave a start, turned hastily around and gazed bewilderingly at Esther.

"Is it possible you don't know me, Esther, Almeda?"

"Lud a mercy! I don't believe I ever should if I'd met you on the street. How you've changed," saying which Almeda dropped into the nearest chair as if quite overcome.

Esther went over and kissed her. "I suppose I have changed. I have grown, and so have you, Almeda, oh, so much; but I should have known you anywhere."

"That's what everyone says, that I haven't changed in looks, only grown; but you, my, how you've changed. Why, your face has grown longer and fuller out, an' you've got a strange look in your face."

"But I don't intend it shall remain strange to you, Almeda," said Esther, smiling into the younger girl's eyes. "I mean to do all I can to make you feel at home while you care to stay here."

"I'm sure that's real kind o' you, Esther, an' I don't blame you one mite for the horrid letter I had from your stingy, stuck-up, old grandmother. Oh, I beg yer pardon—as Esther winced—I didn't mean to hurt yer

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of town, through Longwood and Brookline, and home again by Cambridge. Almeda was delighted. That country places could be like these, with splendid houses and grounds, was a revelation to her. Harvard college bewildered her. Why a college should want so many different buildings belonging to it she could not understand, and Esther finally gave up trying to enlighten her. It did not take long to discover that Almeda's feelings and ambition, or rather, desire, were a long way ahead of her perceptions. They drove down Beacon street on returning home, and as they passed the Somerset club, half a dozen young men were descending its broad steps. Simultaneously they lifted their hats at Esther's slight recognition.

"Ain't they agonizingly polite, though."

"Not at all, the merest common courtesy, no more."

"I don't know as I should like it to have to be on the watch to do the right thing all the time. I like free and easy better. Two of 'em were good-lookin' though. But I can show you the picture of a better looking fellow than either of 'em to-night, and there's a mighty cute little story connected with it, too. Here we be, home again. I've had an awful nice time, Esther."

Esther dined with them that evening and Almeda was thankful. She began to feel very nervous as the dinner hour drew nigh and finally confided to Esther that it made her nervous enough to be alone with her aunt, but it just put her on "pins and needles" to look up and find her uncle's eyes fixed on her. After dinner two or three gentlemen dropped in and Almeda's interest revived at once. But when they essayed to make talk with her, in the bright, brief, touch-and-go manner of their kind, Almeda grew suddenly disconcerted and could not speak at all, except in monosyllables.

"Esther," she said, after the company had gone and the two girls were alone for a moment in Almeda's room, "how long do you suppose it would take me to get used to the ways of talking the folks round here have? I mean all that stuff they talk about so smart, back and forth, and never seem to stop a minute to think about."

"I can't possibly tell you that, Almeda," said Esther a little confusedly. "You know, of course, that different classes and sets of people have different interests, and so are brought up to think and talk about different things. They hear and see the things that the people about them are interested in from their very childhood, and so a knowledge of a variety of things grow upon them insensibly, almost."

"But you didn't hear and see any more in your childhood than I did, yet you seem to have got the hang of everything as well as any of 'em. Was it at school you learned all about everything?"

"Not wholly. Schools do a great deal for people, but I think a great many people overrate what schools can do. People may go a long time to school and learn all the rules in the text books and how to apply them, but if they go on living among uncultured people, they break those rules in their speech every hour in the day. Use and example are of much more value than precept in all the intercourse of daily life, and in the private schools my grandmamma kept me at I had double advantages every way. You see, I was in my fifteenth year when I left Ridgeville. I am twenty now and I have only entered society this winter."

"How did you feel when you first came to your grandmother's, awfully queer and as if you'd never get used to the people and things, and wanting to awfully bad all the time?"

"Not exactly that way. They were all so overjoyed to find me, and as if they couldn't do enough for me, that I could not possibly feel strange; and then something in myself, I can't quite tell you what or why, made me feel that I had got back to something I had always wanted, dreamed of, belonged to and took to naturally."

"That's about the same as telling me I don't belong here, which is true in one way, for I ain't related to the people; but when it comes to fine feelin's I guess I ain't second to none of 'em, even if I can't sling off words as easy as some."

"Has anyone tried in any way to belittle you, Almeda?"

"No, but then—well—no matter; nobody can make me feel I ain't just as good as anybody here, that's all."

"I'm very sure no one here is likely to tell you that you are not," said Esther.

"Oh, people can think and look lots o' things they don't say. I just come to see and satisfy myself, that's all. My day will come some time, somehow." Then Almeda's mood changed suddenly. She took from her pocket a small case, opened it and handing it to Esther asked: "What do you think of him?"

"Very good-looking."

"Ain't he, though. I have got to see the Boston man that takes the shine out of him."

"I hope you never may—that is if you are entirely satisfied with him."

Almeda shrugged her shoulders. "I don't know whether I am or not, haven't made up my mind, although he has asked me to make up my mind three different times."

"Who is he and what is his name?" asked Esther, not knowing what to say in answer to Almeda's revelations.

"Well, in the first place, his name is Horace

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Stanwood, and in the second place, his father keeps the big, new grocery store up to Center-ville; you know where that is, about twenty miles from our place. His father is very well off, or as the old folks up there say, 'a mighty fore-handed man,' and he has an uncle with no children of his own that they say will make him his heir."

"All that is very nice and promising, provided Horace Stanwood himself satisfies you," said Esther.

"Well, he does as far as he's got, but I wouldn't bind myself for anything, not yet."

"I don't wonder at that, Almeda; you are very young."

"That ain't it; I want to wait and see if somebody comes along that seems more than he does. I wish I had your chance to see ever so many people and all sorts of things before I see Horace again. Have you seen anyone you care for more than another, Esther?"

"Why, that is an impossible question to answer, Almeda," said Esther, reddening like a blush rose. "There are so many people that I care for in different ways."

"Oh, yes, I understand; there are so many, and you don't want to be as honest with me as I am with you. But no matter, maybe I can see for myself; I'm not dull in reading people. First time Horace and I met was at the county fair. It was a case of first sight with him. Good-night, Esther, if you must go. I'll be lonesome without you, so I'll go to bed and dream of what to-morrow may bring forth."

[To be continued.]

ARTIFICIAL HATCHING IN EGYPT.

The U. S. consul-general in Egypt, in a report recently published, describes the system of hatching eggs by artificial heat, pursued in that country from time immemorial, and still in active operation. One establishment visited by the consul-general was wholly constructed of sun-dried bricks, mortar and earth. It was 70 feet long, 60 feet wide and 16 feet high, and was provided with twelve compartments or incubators, each capable of hatching 7,500 eggs, or altogether 90,000 at one time. The season begins in March and lasts until May, and three batches of eggs are hatched in this time, each taking an average of three weeks. The fourth week is given to removing the chickens, and preparing the incubators for a new batch of eggs.

The number of eggs treated at this establishment in a single season was therefore 270,000, from which 234,000 chickens are usually obtained. The percentage of chickens would be greater, but the eggs are in some instances procured from long distances and in large quantities, and are therefore liable to damage. The price of eggs is 2½¢ per dozen, and chickens just issued from the shell are sold at 7½¢ per dozen. The loss of chickens after incubation is comparatively small. The whole staff of the place is a man and a boy, who keep up the fire to a temperature of not less than 95° F., arrange the eggs, move them four or five times in the twenty-four hours, look after the chickens and hand them over to the buyers. The number of chickens hatched in this manner throughout Egypt is estimated at 75,000,000, and would, under ordinary circumstances, require 1,500,000 mothers.

RELIABLE statistics show that the percentage of insanity among farmers' wives is greater than in any other classes. The explanation is they work too hard, are left alone too much and have too little chance to take recreation and enjoy society.

MRS. SALTER, a nervous-looking and timid little woman, who bosses a big husband, looks after six children, and does her own housework, is the mayor of Argonia, Kan., and when any of the aldermen get to be bussy or obstructive she just walks up to them, asks if they "consider themselves gentlemen," and threatens to tell their wives about their carryings on. She'd like to see them attempt to override one of her vetoes.

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Our Household.

THE LITTLE LOW ROCKER.

BY E. W. P.

One sacred thing remains to me
Of all the vanished past,
I hold it as a treasure dear,
By memory's dream o'er cast,
'Tis the little low rocker where mother sat
And rocked her babies to and fro,
And crooned for them the lullaby
That still through memory floating go.

Devoid of paint, with many a scar,
And limbs that creak with age,
Yet backward thoughts will linger there,
Tears soil the written page.
For the little rocker where mother sat
Starts up such a train of thought,
There's the deep, wooden cradle where one foot
rests,
While the hand with the needle wrought.

And the old spinning wheel, its drooning
sound
Comes down through all the years,
And the shuiling thread it used to spin,
Is seen through a gleam of tears.
And the little low rocker where mother sat,
Is a link 'twixt the now and then,
But those happy days, and those homely joys,
Can never come back again.

Ah, youth went past with flying feet!
Far over the hills of time,
No sight nor sound comes back from thee,
Save faithful memory's ohime.
But the little low rocker where mother sat,
A spell o'er me can cast,
For as I gaze on its ancient form,
Glad scenes arise from the past.

I see once more my mother's form,
The sunshine on her hair,
I hear once more my mother's voice,
In music or in prayer.
And the little low rocker where my mother
sat,
Creaks aye with a glad sound,
And the spinning-wheel adds its rythmical
hum,
In a jolly musical round.

FADS AND NOVELTIES.

SPOONS.—"A spoon collection was made by a Maine girl while on a tour of the Old World. She endeavored to get a spoon to represent each of the typical nations, and has twenty-three specimens curiously engraved and of much historical and artistic interest. Egypt contributes two spoons, one bearing a palm and the other an obelisk. From Palestine comes a spoon with a crusader's cross on the tip. A gold coin forms the bowl of a spoon from Turkey, the handle of which bears a star and crescent. A ring is attached to the spoon from Finland, as is the custom in that country. Norway contributes the queerest one, the head of the handle being globular, and having carved on it four faces with four eyes between them. There are spoons from Greece, Venice, Rome, Holland Germany, Russia, France, Denmark, Ireland, Scotland, Austria, Sweden, etc., each marked with some emblem of national significance."

The same "fad" is going through our own country; and nearly all of our large cities carry spoons with the name of the city put in the bowl in oxydized letters. Then specialties have sprung up all over. There is the "Witch spoon," "Anneke Jans," "The Pilgrim," "Knickerbocker," those with the Indian head, and a great many other novelties—"Regard spoons," "Congratulation;" all of these carry one of the letters in the handle. In the search for bridal and birthday gifts, surely nothing

that many of our brides get. It is a nice souvenir to carry home from a visit, too, to add one by one a spoon to your collection. One always spends a little money foolishly while visiting another city, and this kind of foolishness would last a long time.

BUREAU BOX.—This is made of a large-sized cigar-box or a pound marsh-mallow tin box. Cut of thin card board, pieces to fit the inside, and cover with a layer of thin cotton and silk, fasten at the corners and slip in the box. Make a puff of silk, which can easily be sewn to the cardboard at one edge and drawn under the box with a thread at the lower edge. The top can be finished with a pin-cushion to use for jewelry. A strap and rosette will keep the lid from falling back. Fasten the lid to the back with silk loops, and place a ring in the middle for a lift.

LOUISE LONG CHRISTIE.

HOW TO ENLARGE A PICTURE.

There are a great many things which seem very mysterious and difficult to accomplish till after a few simple words of explanation. Then we wonder why we never discovered the easy solution. It seems strange that any one who has practiced drawing should not soon know the easiest and most exact way to enlarge a picture, but the fact is, many young artists do not find out this little secret till after they have bothered themselves greatly and mourned over many unsuccessful efforts.

You see in the pretty outline picture a charming little fellow of the "Little Lord Fauntleroy" style. He is sitting in a willow chair, with a cushion behind him, while he gazes intently out of the window. The picture is three inches wide and five inches long. I have divided it into square inches. Now if you wish to make a copy of this picture twice as large as the original, take a piece of paper of sufficient size and draw a panel six inches wide and ten inches long, and then divide it into squares measuring two inches each way. You understand immediately that as the original picture is divided into fifteen squares, so your copy will have also fifteen squares, but those in the copy will be twice as wide and twice as long as those in the original. I already detect myself in an error. I spoke of making the picture "twice as large." The fact is the picture will be four times as large! But you comprehend I meant twice as wide and twice as long.

Having drawn the lines, notice in the original what parts of the picture are where the lines intersect. The upper right hand intersection is at the top of the nose where it joins the forehead; the next below is near the arm of the chair; the next at the child's knee, and the lowest on his slipper. The intersections on the left are, the top one near the corner of the cushion; the next near the upper edge of the child's sash; the next near the lower edge of his dress.

Now remember that the proportions must harmonize. The outline of the top of the head is almost across the middle of the square in which it is, a little below the middle; make it so on your sketch. The distance from the back of the head to the forehead takes in about two thirds of

the width of the square. The hair hanging down behind reaches a little below the middle of the square, and directly opposite that square, toward the window, is the child's hand. From the child's eye to the lower outline of his

chin takes about one third of the square. The lower edge of the sash is in the middle of the square horizontally, and the outline of his waist is in the middle of it vertically. His shoulder and the point under his arm divide the square into three equal divisions. The right foot reaches the middle of the lowest square, etc.

It is not necessary to go into further details. A landscape, or any kind of a picture, can be enlarged in the same way.

KATE KAUFFMAN.

Death finds us midst our playthings—snatches us,

As a cross nurse might do a wayward child,
From all our toys and baubles. His rough call
Unlooses all our favorite ties on earth;
And well if they are such as may be answer'd
In yonder world, where all is judged of truly.
—Old Play.

HOME TOPICS.

At this season of the year, after the spring housecleaning is done, the furniture, which has been somewhat marred by use, may be renovated and polished by using the following mixture: Take two parts of raw linseed oil, two parts of



HOW TO ENLARGE A PICTURE.

alcohol and one part of turpentine. To a quart of this mixture add one ounce of spirits of ether. Apply this to the furniture with a sponge or piece of flannel, and rub it well afterward with a piece of chamois skin or a thick piece of felt or woolen cloth. This will remove all finger marks and scratches and make the wood-work look like new. It is also good to polish a stained floor.

SOAP AND TOWELS.—Great care should be taken in purchasing soap for toilet use. A soap that contains too much alkali irritates the skin, often causing it to become dry and scaly, and sometimes eventually produces sores. Still worse are the colored and perfumed toilet soaps that are sold so surprisingly cheap. They are dear at any price, as they are made from rancid or half decomposed fats, impure alkalies and in the cheapest manner possible, the manufacturer trusting to the coloring and essential oils to hide these defects. A physician of my acquaintance recommends Cuticura soap as being perfectly pure. There are doubtless other soaps which are pure, but I prefer the Cuticura to any that I have used.

When traveling, one ought always to carry their own soap and towels, and never use those provided in lavatories, hotel bed-rooms, etc., as you run great risk thereby. A person suffering from skin disease may have used the soap just before you and you would be in great danger of contagion. The same is true of towels. Of course you would not use a towel which had the appearance of having been used since it was washed, but it is not always safe to use one which looks perfectly clean. The loose texture of the

towel makes it a receptacle to catch and hold all impurities, and if carelessly washed they may not be removed. It is not much trouble to carry one's own soap, wash-cloth and towels, and it is such a satisfaction to know that they are clean. There are nice, little soap-boxes for sale now, some of celluloid and some of silver, just large enough to hold a cake of soap, which are very nice for use when traveling. If you haven't one of these, a little bag made of oiled silk will answer the purpose. I have a traveling-case made of heavy, brown linen, bound with red braid and having seven pockets, which has accompanied me on several journeys, besides going with other members of the family. It will hold towels, wash-cloth, soap-box, comb, brush, tooth-brush and powder and box of camphor ice. When rolled up and tied, everything is together in compact form and ready for use.

SCHOOL HOUSES AND GROUNDS.—

"Still sits the school-house by the road,
A ragged beggar sunning;
Around it still the sumachs grow,
And blackberry vines are running."

In the last few years there has been a marked improvement in the school-houses of the country, and many of them are now a source of honest pride to the community in which they are situated. But there still remains many whose appearance and surroundings will call to mind those lines of Whittier. In too many cases the cheerless and uninviting interior and surroundings causes a dislike to school which it is hard to overcome.

The advent of spring and the housecleaning and beautifying of the homes ought also to lead to an improvement in the school-house and grounds. Talk it over with your neighbors and set a day when you can go there. Make a picnic of it. Give the house a good cleaning, hang pictures on the walls and put curtains to the windows, clean the yard, and if there are low places in it, fill them up so there will be no standing water. Put the outbuildings in good order, plant trees and shrubs. Let the children help in this; do not fear that they will destroy what they have helped to create. The more pleasant and beautiful you can make all about the school-house, the more pride will the children take in keeping it so, and the better behaved will they be in every way. The whole neighborhood will be benefited and you will find it a paying investment. MAIDA McL.

Pitch thy behavior low, thy projects high,
So shalt thou humble and magnanimous be.
Sink not in spirit; who aimeth at the sky
Shoots higher much than he that means a tree.
—George Herbert.

SPRING DISHES.

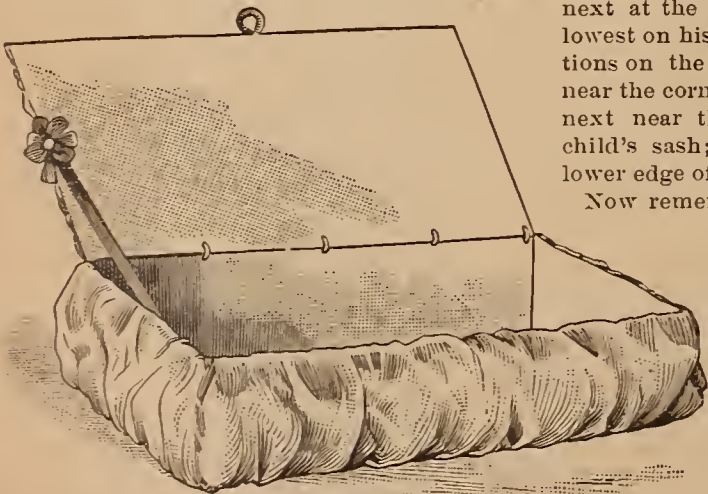
Farmers' wives usually find this season of the year—known as a "scarce time,"—the most difficult period in which to serve appetizing meals. The winter vegetables are out of season and the spring ones have not come. The supply of preserves, jellies and canned fruits are most likely exhausted, hence, what to cook becomes a troublesome question. Yet, with a little thought and painstaking on the part of the housekeeper, many excellent dishes may be prepared that will furnish variety until the gardens begin to produce vegetables. For the benefit of country housewives we give the following:

SPRING SOUP.—Boil a quart of soup stock with half a teacup of rice, for twenty minutes, strain and return to the kettle. Beat the yolks of two eggs and mix with a tablespoonful of cream. Stir in the soup, set over the fire two or three minutes, season with salt and pepper and serve.



TRAVELING-CASE.

POTATO SOUP.—Put four good-sized potatoes on to boil in one quart of cold water, let boil fifteen minutes and drain, cover again with one pint of boiling water; add a slice of onion, a stalk of celery and a sprig of parsley; boil until the potatoes are done. Put two quarts of milk on to boil. Press the potatoes through a sieve. Rub a tablespoonful of flour and butter



BUREAU-BOX.

prettier could be thought of than these, and as the cost ranges from \$1.75 to \$2.50 a piece, it is very nice to club together and several unite in the purchase. They are far more lasting and substantial than the dust-gathering articles of fancy work, etc.,

each together and stir in the boiling milk; pour over the potatoes, stir until smooth and serve.

COLD FISH WITH CREAM SAUCE.—Cover two pounds of cold fish with cold water and let soak two hours, drain and dry, pick to pieces, cover with lukewarm water and set on the back of the stove where it will heat for one hour; drain and press free of water. Put a tablespoonful of butter in a frying-pan, let melt and mix in two tablespoonfuls of flour, stir and pour in a pint of milk, let boil, add the fish, season with salt and pepper, take from the fire, beat in the yolk of one egg and serve with plain, boiled potatoes.

CORNEBEEF ON TOAST.—Cut pieces of cold corned beef in squares; to every pint allow one tablespoonful of butter, one tablespoonful of flour and half a pint of boiling water. Put the butter in a frying-pan, let brown, add the flour, mix well, pour in the water and stir until it boils, put in the corned beef; season with pepper, set over the fire and heat. Have slices of buttered toast on a hot dish, lay the squares of meat on them and pour the sauce over.

PRESSED CORNEBEEF.—Take six pounds of corned beef, remove the bones and tie in a cloth. Put in a kettle, cover with cold water and simmer gently for two hours. When done, take up, place under a heavy weight for twenty-four hours; then remove the cloth, slice thin and serve with grated horseradish.

STUFFED EGGS.—Boil six eggs fifteen minutes. Cut them in halves, take out the yolks, mash fine, add a tablespoonful of melted butter, a tablespoonful of chopped, cold boiled ham, a little salt and pepper, rub together with the back of a spoon until smooth. Fill the halves of the whites with the mixture and press the halves together; dip first in beaten egg, then in grated bread crumbs and fry. Serve with cream sauce.

EGG PUDDING.—Beat six eggs very light, add a pint of flour, a pint of milk, a tablespoonful of butter, with pepper and salt. Chop half a pound of lean, cold-boiled ham, lay in the bottom of a baking-dish, pour in the batter and bake.

RISSOLES OF HAM.—Chop cold boiled ham until very fine; to every pint add two hard-boiled eggs, chopped, and a tablespoonful of butter; season with salt, pepper, nutmeg and a little lemon juice. Mix all together and roll in small balls, lay two inches apart on a sheet of pastry rolled very thin, spread a thin crust over; with a biscuit cutter cut each one, pressing the edges together, brush with a beaten egg and fry in hot lard. Serve with pickled onions.

BAKED MACARONI.—Take six ounces of macaroni and boil until tender, put in a baking-dish, spread the top with bits of butter and grated cheese, pour over a cupful of cream and bake one hour.

MACARONI WITH POTATOES.—Boil half a pound of macaroni, put a layer in a deep pan, cover with mashed potatoes, well seasoned with butter, pepper and salt, then sprinkle with grated cheese and continue until the dish is full. Cover the top with grated cheese, grated cracker and bits of butter, pour over the pint of milk and bake.

WELSH RAREBIT.—Toast squares of stale bread, butter and dip in a pan of hot

stove to boil. Stir until smooth, add two tablespoonfuls of butter and four of grated cheese. Stir over the fire one minute, take off, season with a little salt and cayenne, add the yolks of two eggs. Beat the whites of the eggs very stiff and stir in carefully. Pour in a greased dish and bake fifteen minutes in a quick oven.

ELIZA R. PARKER.

"We shape ourselves the joy or fear
Of which the coming life is made;
And fill our future atmosphere
With sunshine or with shade."

THE NEW DRESS.

Dress reform has been discussed in so many forms, that one can hardly think

for the dress reform underwear, there is none of it that is at all practical. Without skirts you freeze in cold weather, make a spectacle of yourself in windy weather, and are the observed of all observers at all other times. The divided skirt is a delusion and a snare, winding you up worse than the old time skirt, and knickerbockers are yet to be tried, and then should be of silk to be able to walk in them. Very few business women can afford this. Fashion is again enslaving us with the demi-train, than which no worse dress was ever thought of for street wear, as it is too long for cleanliness, and not quite long enough to lift. Without our dresses and ribbons and furbelows

put in a self-sealing fruit jar and it will keep for a long time.

SOUR STOMACH.—I would say to those suffering with weak or sour stomach, after each meal take as medicine one scant teaspoonful of strong pepper sauce made of good cider vinegar. It will burn for a moment, but endure it, and you will derive great benefit therefrom. My daughter has entirely cured her dyspepsia in this way. Take no water with it.

TO CLEAN A LARD CAN.—Warm the vessel at the fire; take meal and rub the inside of the vessel, and then throw the meal to the chickens. Take another handful, and so on until the grease is all absorbed and the vessel looks bright and clean. Then I rinse with hot water, though I do not know but it would do as well without any water.

QUERIES ANSWERED.

TO COLOR WHITE STRAW HATS BLACK.—Mrs. Frank J. Use the black diamond dye first, then give a coating of shoe polish to give it a gloss, if so desired.

TO REMOVE THE DOWN FROM DUCKS.—Frank McC., Half Way, Md. Take pulverized rosin and sprinkle over the fowl after the big feathers have been plucked, then take it by the head and dip it in boiling water; take out and rub it with the hands and the down will peel off; then dip it in cold water and wash with a cloth.

QUILT PATTERNS.—The following are asked for: Can anyone send them in, pieced in calico? The peony, tea leaf, wreath of roses, lily in the basket, lobster's claw, princes feather.

THE SPOTTED CALLA.—This can be purchased of any reliable florist. Ed.

ICE CREAM AT HOME.

There are few people that are not fond of ice cream or ices of some sort, and while ten years ago ice cream was a luxury, since the advent of the Gem Ice Cream Freezer it has become a necessity. Many people are not aware that ice cream can be made at home as easily and in as little time and at no more expense than almost any other dessert. Ten minutes for freezing or twenty minutes for the whole operation. The Gem Freezer is especially adapted for family use, and uses less ice than any other. A recipe book (104pp.) "Dainty Dishes for all the Year Round," by Mrs. S. T. Rorer, Principal Philadelphia Cooking School, is packed in each freezer, and gives 120 Recipes for all kinds of ice creams and frozen desserts. Mrs. Rorer uses, and recommends the Gem Freezer, after having used nearly all other kinds. Sample copy of the recipe book will be mailed on receipt of 6c, if the name of this paper is given, by the manufacturers of the Gem Freezer. American Machine Co., Philadelphia.

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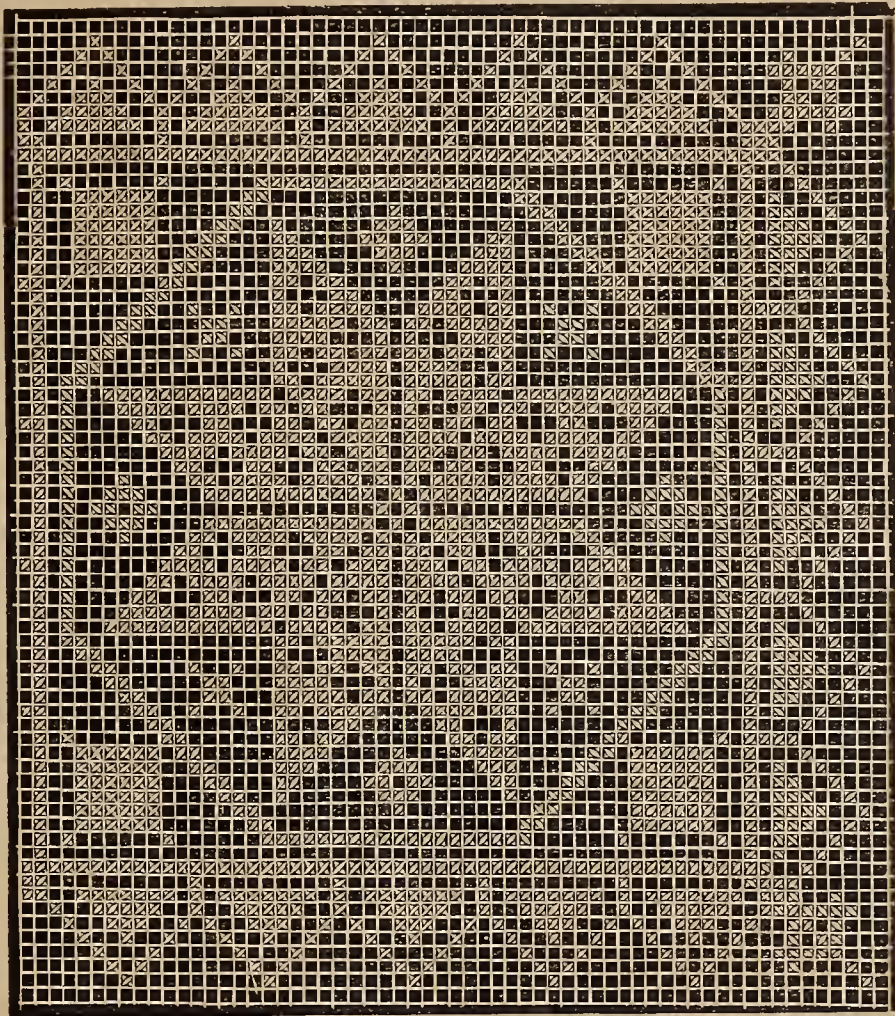
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CROSS-STITCH FOR GINGHAMS.

what will come next. It gets to be a question with a business woman how to dress so one can keep looking neat and orderly in business, and get through all weathers without being laid up for repairs too frequently. I had in mind for two years a dress I had thought would about meet the requirements, when picking up a paper one day I read almost the very description of my dress, and said to be the invention of an English lady. Well, the old adage of "Great minds, etc.," so without intrenching on her idea I shall give you mine. The dress is to be of Harris cassimere, like the gentlemen use for their suits. The skirt is to be laid in three box-plaits in the front and sides, and fine plaits in the back. This skirt should be sewed upon a drilling waist, tight and snug fitting. In length it should clear the ankles. No lining in it, but a deep facing of silk. The seams to be laid open and pressed. For the waist I should match it in color in cashmere, surah, or any smooth woven dress goods, and have it made just as pretty as any other dress waist.

For street wear, a jacket of good style like the skirt. A toque or bonnet of the goods trimmed with ribbons to correspond, or if it was becoming, a hat covered with the goods and trimmed plainly. For wet weather, Jersey leggings to button over the rubber and shoe, and to come nearly to the knees.

I cannot understand how it compromises a woman's dignity or womanliness to appear in a dress that exposes the feet. No woman wears No. 9 or 11, and if it isn't a disgrace for a man to walk about and display such feet, why should a woman blush to show a dainty No. 3 or 4, and many only wear 1 and 2.

In the house, a neat demi-train skirt can be substituted for the street dress. As

we wouldn't be women, and who would be a man? CHRISTIE IRVING.

FROM OUR CONTRIBUTORS.

We are always glad to hear from our friends of any little household helps, and we would feel as if we were helping you if sometimes we might have an appreciative word. So let us hear from many of you this year.

Mrs. M. E. R. writes us that she has success in stopping a child's cough at night by wrapping a cloth, wrung out of cold water, about its neck, and giving it something to hold in its mouth—a lump of sugar tied in a cloth—and when the child has an inclination to cough, let it suck the sugar for a moment. If it is a dry cough it is best not to yield to it.

Another mother recommends a way to keep the feet of the little ones warm. Keep a small piece of plank, which can be kept in the oven to heat, and have a cover made of ticking to fit over it. Going to bed with cold feet will often produce a very severe cold, the effects of which may prove fatal.

NEW DOUGHNUTS.—Mrs. John D. S. gives us this new idea: Cut out two rounds of the dough, drop a teaspoonful of jelly in the middle of one, place the other over it, pinch the edges together and fry as a ball. It will be a pleasant surprise to the eater to find such a dainty filling. Also dust them with rolled, powdered sugar while hot.

From another comes a good recipe for lemon jelly, and a cure for sour stomach.

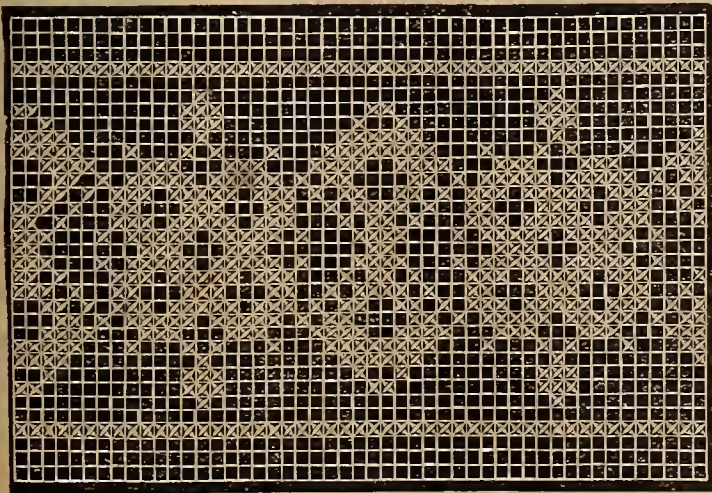
LEMON JELLY for cake, to put between layers and on top:

2 beaten eggs,
1 grated lemon,
1½ cupfuls of sugar.

Stir all together, put in a tin cup, set in a pan of boiling water and stir until it thickens. Make it up by the quantity,

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CROSS-STITCH FOR GINGHAMS.

water, lay on a heated dish and stand in the oven to keep warm. Put half a cup of milk in a sauce-pan and set over the fire, when hot, add two cups of grated cheese and stir until it melts; season with salt and cayenne, stir in the yolks of two eggs, pour over the toasted bread and serve.

CHEESE RAMAKIES.—Put three ounces of bread in a teacup of milk and set on the

Our Sunday Afternoon.

JUST AHEAD.

THE day is fast approaching,
The time is drawing near,
When the heavens shall roll backward,
And the Son of man appear.

Son of man, the world's Redeemer,
Coming back to earth again;
Coming not to toil and suffer,
But on David's throne to reign.

Then with bodies made immortal,
In a land divinely fair,
We with Christ shall dwell forever—
Who of us would not be there?

Christian friends, stand firm and steadfast,
Do not slumber, do not sleep;
Do not wander from the pathway
Christ has marked for us, his sheep.

If we sow beside all waters,
If our feet are swift to run
In the path of Christian duty,
We shall hear at last, "Well done."

THE RELIGION OF THE HINDOOS.

THE existing religion of India is one of those fabrics as complex, irregular and multifold as the roof of a pagoda or the chasing of a Benares vase. It is an outgrowth of Brahmanism, through development, like the foliage, the seed, the flowers, and, in fact, the entire vegetable product of the smooth and erect trunk of the tree. Its sects, its rights, its gods cannot be numbered. It is impossible to grasp them, to discover

in them any dogmas or fundamental articles of faith, or to unravel the chief threads of its texture. A little of everything is to be found in Hindooism. Take all the creeds of humanity, all the observances these creeds impose; Christianity, the religion of Islam, of Buddha, ancient polytheism, fetishism, demons and animals, drown the whole in a tide of pantheistic philosophy, and you will have that extraordinary compound made up of incoherences and contradictions which is called Hindooism. The Brahman who, concentrating his thought, makes an effort to lose himself in Brahma; that inert fakir who, with arms extended towards heaven, for years aspires to the paradise of Siva; that rajah who, in honor of Vichnu, the charitable god, devotes three hundred rupees daily to the support of the poor; that Soodra kneeling before a round stone, are like members of the great religious community of India.

There is no pronounced separation between the different sects. The adorer of Siva calls the worshipper of Vichnu brother. Each god is so varied in his forms and attributes that, through certain observances common to all, they all blend in one whole. Siva, who is the lord of life, is also the lord of death. He is love and terror, beneficent and baleful, a great ascetic sage, philosopher, and at the same time a joyous and savage mountaineer. No system of anterior and superior morality impels in a single direction the mass of creeds and observances. The debauches of certain sects and the mascerations of the fakirs are two forms of the worship of Siva. It matters little that they seem opposed; the series of sacred texts extends over a period of time so long, they have been composed at moments of social development so dissimilar, and constitute such an enormous mass, that they sanction all morals and all dogmas, and the religion of each sect forms a system as vague and inconsistent as the aggregate of the Hindoo religion.

What is Vichnuism, for example? In the beginning, Vichnu is the "preserver." Between Siva who organizes and Siva who dissolves, there is a place for the power that maintains. That plant which has germinated from the soil will re-enter the soil. Meanwhile, through the influence of an internal power, it lives on and persists in its form. The power which thus sustains the entire world is Vichnu, of whom the ordinary symbol is properly a tree. In making itself popular, the abstraction becomes a distinct entity, a personal god, without whose assistance the world would collapse; as a consequence, therefore, a charitable and benevolent god, who in ten successive incarnations, under the form of a fish, a tortoise, a boar, of Rama, of Buddha and

so on, has descended for the salvation of the world and of humanity. Thus multiplied and developed, Vichnu disappears like the body of the tree which conceals the luxuriance of its vegetation and is no longer seen except in its resultants. The idolatry of the black races, Buddhism, the religions of Islam, Christianity, have in turn supplied the elements which it has assimilated. To-day, denuded of precise dogma of a regular hierarchy, composed of a hundred groups which vegetate one by the side of the other, it makes us meditate on those primeval organisms with innumerable tentacles, but deprived of vertebrae and bony structure, which are capable of resisting all mutilation, for the reasons that they are composed of independent centers, of which each may be wounded without the entire body perishing. Such, then, is Hindooism, of which this religion of Vichnu, so diverse and comprehensive, is, however, only a manifestation.

At Calcutta, an Englishman was lamenting the scanty success of Protestant missions. A few Hindoos were converted, most frequently through self interest, in order that they might be employed by Europeans. After a few years they re-embraced their caste and their sect. The Brahmins listen with patience, indulgence or curiosity. Their religion is too evanescent and multiple to permit them to be captured bodily. It is impossible to refute it as English missionaries claim to have refuted Mohammedanism. It is, hence, that the Brahmins offer to admit Christ among the three hundred and thirty millions of gods of the Hindoo pantheon, provided they be allowed to consider him as one of the forms of Vichnu, incarnated for Europeans. Thus lives and flourishes the religion of India, the most plastic of all religions, the most capable of adapting itself to circumstances; so complex and uncertain in its form and direction that it does not seem a religion, and yet may be called one as one calls Hindoo, that human group in which combine races of all colors and cultures and that yet possesses unity. At first clear in its pantheistic source, then obscured by the religious ideas of the nation's victors, and vanished; spread over a lapse of thirty centuries, of which each has modified its form and added to its constitution, to-day ramified into a vast system of creeds, observances, morals, philosophies and sects, in which the eye no longer recognizes any system or design.—Translated for Public Opinion, after the French of Andre Chevrillon, from the Paris Revue des Deux Mondes.

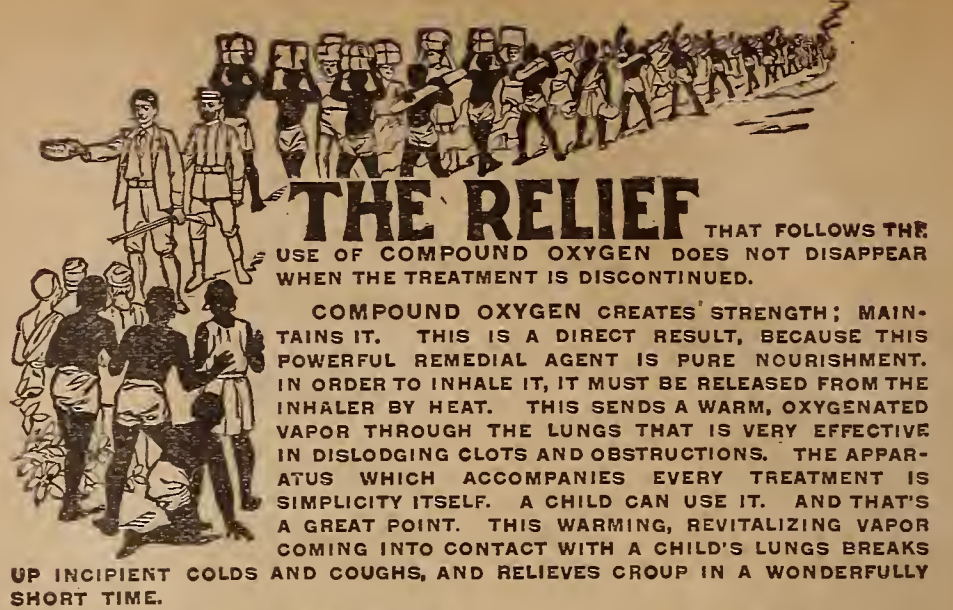
AN AWFUL FACT.

"A Christian man" writes: "It seems to me that the devil has sent out many ministers in these days, and is determined to make Christians support them." This may be a hard saying, and yet our Master tells us that in that day of awful revelation which is to come, many shall say: "Lord, Lord, have we not prophesied in thy name? and in thy name cast out devils? and in thy name done many wonderful works? And then will I profess unto them, I never knew you; depart from me, ye that work iniquity." And, if there are to be many who are thus woefully disappointed in the day of judgment, it is very possible that some of them may be in our midst at the present time, and may be doing the work of Satan while professing to be servants of God.

And it is not necessary that these men should all be hypocrites or vicious men, for a blind guide can lead one into a ditch quite as effectively as a guide who knows the way, and deliberately misdirects men. A man who attempts to preach a gospel which he does not know himself, and to speak of a power which he has never experienced, may be doing Satan's work, though he may not be aware of the fact.—Sunlight Magazine.

CURIOUS WORDS.

It is said there are only two words in the English language which contain all the vowels in their order. They are "abstemious" and "facetious." The following each have them in irregular order: Authoritative, disadvantageous, encouraging, efficacious, instantaneous, importunate, mendacious, nefarious, precarious, pertinacious, sacrilegious, simultaneous, tenacious, unintentional, unequivocal, and vexatious.



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THE DOCTRINE OF IMMORTALITY.

The revelation of immortality through the gospels was the emphasis of a fact or faith in a fact that already existed, if it did not dominate, in the thought of mankind. Until recently the great religions that antedated Christianity were supposed to teach the doctrines of a future life and man's responsibility to the supreme power. Prof. Max Muller has ably shown that Buddhism is pregnant with this teaching, but his position is challenged and his proofs are put to the test. The *Dharmapada* must be read again and more carefully than ever, for a strategic point is at stake in the discussion. Perhaps some one will appear who will dispute the claim that Brahmanism is specific in its utterances of immortality; even Zoroaster may be interpreted as ambiguous or silent on the momentous theme; and we may finally learn that no pagan religion is illumined with fore-shadowings of a future existence.

The doctrine of immortality was made manifest by the great teacher, because it was but dimly indicated by the sages of the ancient faiths; because even Judaism was almost quiescent respecting it; because the human mind but vaguely proclaimed it, and because a knowledge of it is an inspiration to live according to the best standards and the conditions of progress. In an intellectual point of view it is well to ascertain the extent of the spiritual barrenness of the old-time religions, for they were spiritually aimless and non-productive of an orderly and progressive life. But it is equally well to remember that they had a providential relation to the final religion and served a propædæutic use in history. Judaism was not the only preparatory religion for Christianity. Paganism, though idolatrous, was a sign-board pointing to Calvary. With its incarnations, sacrifices, systems of duties, despairing ethics and groanings for new conditions, it meant more than it proclaimed and voiced the want of redemption and immortality. The weakness of present-day criticism of the old systems is that it applies the gospel standard to them, whereas they should be interpreted from their own standpoints rather than from ours. This the critic declines to do, and shouts his victory at the expense of a faith helpless to answer for itself and yet defiant of the injustice perpetrated upon it. We shall lose nothing by recognizing the essential spirit and meaning of the crumbling faiths of the old world.—The Methodist Review for January.

Dr. Hoxsie's Certain Croup Cure, the only remedy in the world that will cure a violent case of croup in half an hour. By druggists, 50c.

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Of Pure Cod Liver Oil and HYPOPHOSPHITES of Lime and Soda

is endorsed and prescribed by leading physicians because both the Cod Liver Oil and Hypophosphites are the recognized agents in the cure of Consumption. It is as palatable as milk.

Scott's Emulsion is a perfect Emulsion. It is a wonderful Flesh Producer. It is the Best Remedy for CONSUMPTION, Scrofula, Bronchitis, Wasting Diseases, Chronic Coughs and Colds. Ask for Scott's Emulsion and take no other.

Guaranteed Watch \$2.98.



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The cases are made of a plate of fine 14k gold over the finest quality of German silver, making a case composed of nothing but fine gold covering finest quality of German silver. With German on the inside and 14k gold on the outside, we warrant the cases to be equal in appearance to a \$50 solid 14k gold watch. They are open face, smooth basins, finished to a dazzling brightness, dust and damp proof and warranted to wear a life time. Different from the cheap brass watches offered, the case contains nothing but gold and the finest quality of German silver, and in fact, in every way except intrinsic value equal to a \$50 solid gold watch. The movement is a fine 3-jewel style, finely jeweled polished pinion, oil tempered main spring which does not break, and all the latest improvements. A guarantee is sent with each watch that it will keep accurate time for 2 years ordinary use.

OUR 90 DAY OFFER. That all may have this beautiful watch in their own hands, and fully examine and see for themselves the value and running qualities of same, we will send it C. O. D. to your express office, with the privilege to examine it. All we ask is any business man in your city as reference that you are ordering the watch in good faith, and if found satisfactory you can pay the express agent \$2.98, or when full amount is sent with order we give a fine gold plated chain and charm free. If not satisfactory you can refuse same and you are nothing out but your time in going to the express office. Knowers of the fine quality of this watch we make the above offer, as anyone wanting a good time piece will accept same at once on examination. Order at once as our price will be advanced. Address WILLIAMS & CO., 125 S. Halsted St., Chicago, Illinois State where you saw this advertisement.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammoncton, New Jersey.

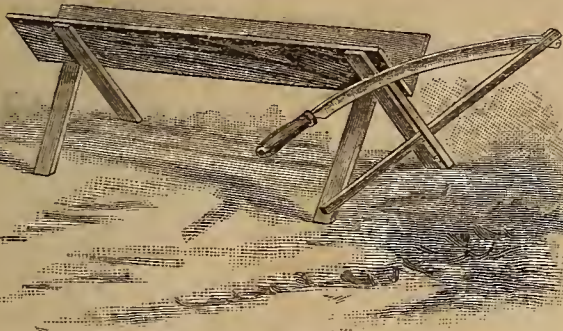
GROWING GREEN FOOD.

As the keeping of a garden may compel many to confine their hens in yards, it becomes a difficult matter to allow them to secure green food. One of the best methods for so doing, however, is to have changeable yards; that is, the yard should be divided. While the hens occupy one side, the other side may be spaded up and sown to mustard, millet, or any kind of crop of which the seed is not expensive. Such crops need not mature, hence the hens can be turned in when the plants are three or four inches high. Wheat, oats, sorghum, corn, turnips or anything that will provide green food will answer.

The side occupied by the hens before changing them to the green plot may now be spaded up and treated in the same manner. There are many advantages in the plan; among them, the providing of green food, the cleaning of the yards by turning under the filth, the manuring of the yards by the hens, the saving of grain, the promotion of the health of the fowls and the procurement of a greater number of eggs. The only outlay is a partition fence. There is no extra cost for labor, as the yards need not be cleaned up except when ground is spaded, which turns under all filth.

A HOME-MADE FEED-CUTTER.

Those who are interested in the use of chopped clover for fowls, will, no doubt, notice the illustration of a cheap, home-made feed-cutter, sent us by Mr. W. J. Noble, State Center, Iowa. Mr. Noble says: "I am astounded at the great amount of finely-chopped clover that a flock will eat, and for the use of those who desire a cutter, I send the cut of one not new, but which will answer the purpose. To make it, take four pieces of two by



A HOME-MADE FEED-CUTTER.

four scantling, three feet long, cross them within one foot of the ends and place thereon two boards, securely fastened, to serve as a trough for holding the clover to be cut. Next take a stick about one and one half by two inches, and three feet long and fasten one end at or near the bottom of one of the legs with a bolt and at the other end of the stick make a mortise one and one half by two inches long, to admit the heel of an old scythe which has been bent back and made flat, with a half-inch hole in it to admit a bolt. Have the point of the scythe hammered down so that a handle can be put on it. On the inside of the trough put two strips of thin iron about one inch wide and as long as the boards are wide, so that the scythe will not cut into the ends of the boards. The stick in which the scythe is put should be incased with a board, so as to steady the motion of the scythe. One peck of feed can be cut in two minutes."

FORTY CENTS PER POUND.

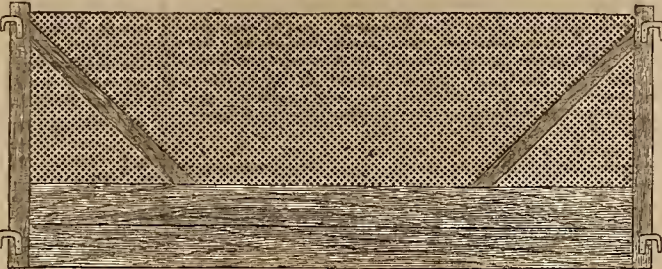
Such was the quotation in the New York market, March 14th, for broilers. Every one in the West cannot ship to New York, but with Chicago, Cincinnati, Cleveland, St. Louis, Louisville, Detroit and other good markets, the prices in New York govern other places to a certain extent. Prices for broilers are higher this season than last year, and the outlook for the poultry industry is excellent. Every season we notice that prices are better, and old fowls sold at higher figures last year than at any previous time.

EARLY CHICKS AND HAWKS.

Chicks hatched in April and allowed to run with the hens are liable to be caught by hawks. If the hens and chicks are given a small enclosure and a few piles of loose brush placed in the enclosure, the chicks will have an opportunity to escape. The hens are always on the lookout for hawks, and warn the chicks, which fly under cover. If some kind of retreat is provided, so that the chicks can immediately be sheltered, the hawks will miss their prey.

PORTABLE PANEL.

Our illustration shows a drawing of a panel of fence, of any length preferred, sent by Mr. A. P. Griem, Oak Summit, N. Y. It has two hooks on each end, which are simply hooked into rings or staples on the posts. It is so well shown in the illustration that a further description is unnecessary.



PORTABLE PANEL.

The panel is composed of two boards at the bottom and wire netting above. Any reader can understand how the panel is constructed at a glance.

THE CURCULIO AND HENS.

The curculio will begin work early, and if the plum trees are jarred daily, with a few hens confined in the plum orchard, they will quickly clear out the depredators. It is best to plant plum trees in the poultry yard, so as to have the hens limited in space and close to the trees. It is a good plan, when feeding in the orchard, to scatter a spoonful of wheat around each tree, so as to induce the hens to scratch around them, which will soon become a habit. In so doing, they secure many insects and destroy them.

THE SITTING HENS.

When a hen leaves her nest frequently and finally abandons it, after being on the nest for two weeks, the difficulty may always be traced to lice. The warmth of the hen hatches them out in countless myriads, and they swarm over every portion of her body. When a hen begins to sit, give her a clean nest, and dust Dalmatian insect powder over the nest twice a week. Hold the hen by the legs, head downwards, dust the powder well in to her feathers and rub a few drops of oil on her head.

BEES There is money in them if rightly handled. Write **WM. W. CARY, COLRAIN, MASS.**, and see what he will send you free. Mention FARM AND FIRESIDE when writing.



All other lamps make more or less smell—the "Pittsburgh" none.

The reason is: the combustion is perfect in the "Pittsburgh," not quite in others.

As might be expected, the "Pittsburgh" burns less oil and gives more light than any other central-draft lamp.

The reason why the "Pittsburgh," new this year, is taking the lead already is its cleanliness; it is the cleanest of lamps; it almost keeps itself clean. It has no dirt-pocket; has no need of a dirt-pocket.

A common servant, or even a child, can take care of it. Send for a primer.

Pittsburgh, Pa. **PITTSBURGH BRASS CO.**
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NATURE'S SPECIFIC The Wonderful Kola Plant, FOR THE CURE OF ASTHMA FREE ON TRIAL.

Discovered by African Explorers on the banks of the Congo river, West Africa, is a certain and unfailing cure for Every Form of **ASTHMA**. A Positive Cure Guaranteed, or if you desire it, **NO PAY UNTIL CURED**. Office for Export and Wholesale Trade, 1164 Broadway, New York. For Descriptive Book and Trial Case of the **KOLA** Plant Compound, (**HIMALAYA**), FREE by Mail, address Central Office, **KOLA IMPORTING COMPANY**, 132 VINE STREET, CINCINNATI, OHIO.

See New York World, May 18, 1890; Philadelphia Press, May 19; Christian Observer and Medical Journal, April 9; etc., for full accounts of this wonderful botanical discovery. The Christian Evangelist, May 30, 1890, says editorially: "If no other result than the discovery of the Kola plant followed the explorations of Stanley and associates, surely their labors were not in vain. We have the most convincing proof that it is a certain and unfailing cure for Asthma in all its forms, and is the most valuable medical discovery of this century." Remember, **NO PAY UNTIL CURED**.



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Dinner Set, No. 45, 112 Pieces.

Premium with an order of \$20.00.

Packed and delivered at depot for \$9.00 cash.

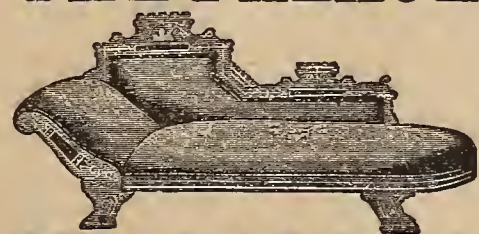
NURSERY KNIVES

require the finest steel and best temper to make a clean cut and hold their edge. We sell our best pruning knife, 85 cts., postpaid; grafting, 25 cts.; budding, 55 cts.; pruning shears, 90 cts. The MAHER & GROSCH cutlery is hand-forged from razor steel, every blade tested and warranted. Look at knife; cut is exact size; price, 65 cts.; blades equal any \$2 razor. Our price for 60 days is 45 cts.; 5 for \$2, postpaid. Lady's 2-blade pearl, 35 cts.; 7-inch Steel Shears, 60 cts.; knife shown here and shears, \$1, postpaid. Barber's hollow ground razor, \$1.25. Best Strop ever made, 50 cts. Send for free list.



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\$7.00 LOUNGE

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PARLOR SETS at \$24.35, BED ROOM SETS at \$17.98

and a full line of all kinds of Furniture at prices that will surprise you. **WE SELL DIRECT TO THE CONSUMER.**

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PALACE FURNITURE CO., Elm and Front Sts., Cincinnati, O.

BEAUTY, COMFORT, STYLE and ELEGANCE

NO HOME IS COMPLETE

without our **CELEBRATED \$7.00 PALACE LOUNGE**. It has Walnut Frame, trimmed in handsome Embossed Plush, 6 ft. long and 21 in. wide. In fact worth twice the money. A handsome and useful piece of furniture for any Home.

OUR \$11.00 FOLDING BED LOUNGE

is the finest thing out. Can be used as a Lounge or turned into a **FULL SIZE BED** in a second.

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and a full line of all kinds of Furniture at prices that will surprise you. **WE SELL DIRECT TO THE CONSUMER.**

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EGGS and FOWLS FOR SALE From 50 Varieties. Large. My fowls won over 800 first and 2nd prizes at State shows last fall. For full description send three one-cent stamps and get the finest illustrated catalogue out, 8x11, 32 pages. **CHAS. GAMMENDINGER, COLUMBUS, O.**

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A most valuable book for anyone who keeps chickens. Contains 60 pages and illustrations. Tells how to operate, shows the profits that have been made by caponizing, and gives all information required to be a successful caponizer. Written by that veteran poultryman, Mr. George Q. Dow. Sent post-paid, for 50 cents, or five copies for \$2.00. Get Four friends to join you, and get yours free. **THOMAS W. CHILD, 150 NASSAU STREET, NEW YORK.**

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For Best Incubators and Brooders ever invented for hatching and raising chicks, address G. S. Singer, Cardington, Ohio, for circulars. **Brooders Only Five Dollars.**

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Simple, Perfect and Self-Regulating. Hundreds in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other hatcher. Send 6c. for Illus. Catalogue. **CEO. H. STAHL, QUINCY, ILL.** Circulars free. Mention Farm and Fireside when you write.

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\$10.00 FOR 25 Cts. A large profusely illustrated Book of 128 pages, containing more than Ten Dollars worth of valuable information to poultry raisers, will be sent by return mail, post-paid, for only 25c., including the Household Pilot 6 months on trial, a large 8 page, 40 column illustrated household paper, one of the best in America. We make this great offer to introduce our paper into new homes. Address, **Pilot Publishing Co., New Haven, Conn.**

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A GRAND INVESTMENT for the Family, the School, or the Library. Revision has been in progress for over 10 years. More than 100 editorial laborers employed. \$300,000 expended before first copy was printed. Critical examination invited. Get the Best. Sold by all Booksellers. Illustrated pamphlet free. **G. & C. MERRIAM & CO., Publishers, Springfield, Mass., U. S. A.**

Caution!—There have recently been issued several cheap reprints of the 1847 edition of Webster's Unabridged Dictionary, an edition long since superannuated. These books are given various names,—"Webster's Unabridged," "The Great Webster's Dictionary," "Webster's Big Dictionary," "Webster's Encyclopedic Dictionary," etc., etc.

Many announcements concerning them are very misleading, as the body of each, from A to Z, is 44 years old, and printed from cheap plates made by photographing the old pages.

\$20 HIGH ARM PHILA. SINGER Automatic Bobbin Winder. 15 Days' Trial. Warranted 5 years. Self-setting needle, self-threading shuttle. Light-running and noiseless. All attachments. Send **THE C. A. WOOD CO.,** for free 17 N. 10th St, Phila., Pa. circular.

A GOLD MINE. This Gold Ring is 22 karats fine and is made from the pure bars of gold. Don't throw away your money buying brass rings advertised by others under misleading names but buy this 22 karat Pure Gold Ring which will be sent to any address on receipt of \$1.00. **The Chicago Watch Co., 142 Dearborn St., Chicago.**

POULTRY for PROFIT. We will send for 25 cts., or 15 cts. if you mention this paper, **FARM AND FIRESIDE**, a 20 page magazine, six months. Sample copy free. **I. S. JOHNSON & CO., Boston, Mass.**

Mention Farm and Fireside when answering advertisements.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Milking Machine.—W. W., Hotchkissville, Conn. There is no milking machine made that is a success, so far as known.

Book on Mushrooms.—In reply to numerous inquiries about the culture of mushrooms we refer our readers to a practical treatise on the subject, "Mushrooms—How to Grow Them," price, \$1.50. Published by Orange Judd Co., New York.

Japanese Buckwheat.—C. C., Winchester, Ind., asks: "How will it do to sow Japanese buckwheat early in the season, say about the last of May?"

REPLY:—Nothing is gained by sowing it too early. Sow at the usual time and sow the usual quantity.

Value of Pure, Dried Blood.—J. W. R., Arctic, Ind., asks for analysis and value of dried blood. It contains nine to ten per cent nitrogen and about two per cent phosphoric acid, and a ton of it has a fertilizing value of about \$35. It is one of our best sources of nitrogen.

Sweet Corn.—S. T. J., Kokomo, Ind., in answer to a query, writes: "The canning company here pay \$6.50 per ton for corn in the husks, \$6.50 per ton for tomatoes and \$30 per ton for peas in the field. These prices make returns of \$20 to \$125 per acre, according to season."

Worms and Bugs on Cabbage.—Mrs. R. R. O. also asks for remedy for worms and bugs on cabbage. Buhach is a never-failing remedy for cabbage worms. So, also, is the kerosene emulsion, tar water, and perhaps hot water. Bugs (I suppose you mean the flea-beetles) are hard to fight. Spraying them with very strong tobacco tea, however, will kill them or drive them away.

Is Sulphuric Acid Injurious to Soil?—REPLY BY JOSEPH:—J. R. W. also asks whether the continued use of dissolved South Carolina rock would result in filling the soil with sulphuric acid to an injurious extent. There is not the least danger that the use of acid phosphate, as practiced on ordinary grain farms, would result in injury from the source mentioned; no more than the use of plaster, which is sulphate of lime. On the other hand, I do not believe in the long-continued, exclusive use of acid phosphate, for the reason that it furnishes only one of the three chief elements of plant food, and such use would soon result in impoverishing the soil in potash and nitrogen.

Ground Cherry.—Mrs. R. R. O., Brentwood, Tenn., asks how "Improved Ground Cherry" is grown. The ground cherry, alkekengi, strawberry tomato, or under whatever new-fangled name this old thing may be offered by seedsmen, is a member of the nightshade family, closely allied to the egg-plants, tomatoes, etc., and is a very easy thing to grow. In fact, after you have once introduced it into your garden, it will usually reproduce itself freely from seed, plants springing up readily in the vicinity where the plants ripened fruit the year before. If you start them from seed, sow in hot-bed as you would tomatoes, and treat in same way.

Planting Willows.—Old Subscriber, of Nutley, N. J., writes: "How should I put in willow branches to get them to grow on the bank of a stream. I put them in in the spring, sharpening them, and also without sharpening. In both cases they died."

REPLY BY JOSEPH:—Forty years ago I saw my grandfather plant great willow sticks, six or eight feet long and cut off square at the lower end. He pushed them down into the soft ground near the stream, and they almost invariably grew. The trouble with our friend's planting, probably, is that the bark of the sets was injured so much in forcing them through the soil that there was no chance for them to grow. This kind of planting is rather crude anyway. It would be more business-like to make cuttings from young wood, twelve to eighteen inches long, and either root them in well prepared soil, or stick in good ground where the tree is wanted to grow. In either case, unless ground is very mellow or soft, a hole should be made for each set with an iron rod, to prevent injury to the bark, and the soil should be packed firmly around the cutting.

Salt as a Fertilizer.—A. M. E., of Organ Cave, W. Va., writes: "I intend to use common salt as a fertilizer for corn on a piece of land with clay subsoil. How much should I put on? Would it be better to mix with wood ashes, or hen manure, or land plaster? If so, in what proportion? Will the salt prevent the grub from working on the corn?"

REPLY BY JOSEPH:—As to the last question, I must answer "No." What little salt we can safely apply on soil for any crop, will have very little effect on insects, and weeds either. As to the mixing with other substances, I consider it very much the best plan to mix the salt with ashes or hen manure, using just as little salt, and just as much of the other ingredients, as practicable. We should not forget that salt contains no important plantfood, while hen manure is a most excellent complete manure, and ashes contain at least the two important mineral elements of plantfood. Salt may stimulate, and thus give you an immediate effect, or it may not.

Value of Fertilizer.—W. H. W., West Chester, Pa., asks about the value of fertilizers, analyzing as follows: "(1) Available ammonia, 1½ per cent; available phosphoric acid, 7 per cent; potash soluble in distilled water, 2½ per cent; price \$23. (2) Available ammonia, ½ per cent; available phosphoric acid, 7 per cent; potash soluble in distilled water, 2 per cent; price \$21."

REPLY BY JOSEPH:—A ton of these fertilizers do not cost much money, yet they are cheap. In the first-named you have about 20 pounds of nitrogen, worth 17 cents a pound, or \$3.40 in all; 140 pounds of available phosphoric acid at 8 cents, or \$11.20 in all; and 45 pounds of potash at 6 cents, or \$2.70 in all. The fertilizer is worth, therefore, \$3.40+\$11.20+\$2.70=\$17.30. The difference between this and the selling price, \$23, I should think to be enough to pay for handling, mixing, carting and legitimate profits. The second brand has a fertilizing value of about \$14.60, and the difference between this and selling price again pays liberally for those incidental expenses of the manufacturer. Possibly your crop might be benefited by more nitrogen. Try a little nitrate of soda in spring. Or, instead of these "cheap" fertilizers, try a high grade one, using 200 pounds per acre, or bone meal and ashes, etc.

Guano for Corn.—M. T., Springboro (no state named), writes: "Is the guano for sale in Baltimore, Md., a good fertilizer for corn on a clay loam? Or, will its continued use injure the land in the same way as a man is injured by the continued use of whiskey? Will it stimulate the land for the time being and then leave it poorer than ever?"

REPLY BY JOSEPH:—It is a hard question to answer in a few words. Most of the "guanos," to which our friend refers, are simply phosphates. They contain no plant food except phosphoric acid. Where the soil is deficient of that element, and provided with sufficient potash and perhaps nitrogen, as frequently the case on grain farms, guano often gives very satisfactory results. If its use is long continued, of course the other plant foods (potash and nitrogen) are all the time taken off and no returns made for them. So, in the end the land would be poorer in these plant foods. But the continued use of any one particular plant food—like phosphoric acid, as in this case—is not reasonable and not advisable. A rotation of manures is as necessary as a rotation of crops. On the other hand, guano is a plant food, and not merely a stimulant. Without knowing anything about the needs of the soil, however, I would prefer a manure containing some potash and nitrogen also. I have grown sweet corn on land "too poor to grow white beans," by putting three or four hundred pounds of a good, concentrated vegetable fertilizer per acre, along the drills. I do not suppose that our friend means the high-priced "Peruvian guano," which is also a high-grade manure, quite rich in nitrogen, analyzing about five per cent nitrogen, eighteen to nineteen per cent phosphoric acid and three to four per cent potash. This would be safe in most cases, although even this has an excess of phosphoric acid.

VETERINARY.

Conducted by Dr. H. J. Detmers.
Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Stringhalt.—J. P. J., Tipton, Kan. Your horse has stringhalt. It was very likely caused by overexertion, and is incurable.

Too Old.—W. F. O., Newfield, Conn., writes: "I have a mare twenty years old that is in a good, healthy condition, but never had a colt. Is she too old to have a colt?"

ANSWER:—Your mare is too old; her time has passed.

Wheat as Food for Horses.—F. A. B., Weedsport, N. Y. Wheat is not a good food for horses, and should not be given to brood mares. To a limited extent, and to a limited extent only, it may be given to working horses.

A Short Mane.—T. C., Altoona, Ill., writes: "I have a five-year-old mare that has a long, heavy tail, but her mane is short and uneven. Can you tell me what I can do to make her manegrow?"

ANSWER:—You can do nothing to force the growth of the mane. Good and thorough grooming may prevent a further falling out of the hair.

Itching.—W. C., Oliphant Furnace, Pa. Before a remedy can be applied, the cause of the itching sensation must be ascertained, because the remedy must consist in a removing of the cause. The cause, however, can be learned only by an examination, and not by guessing, which latter, at least, is a very unreliable thing in making a diagnosis.

Sore Mouth.—H. C., Olena, Ohio. You evidently have used a very unsuitable bit, and the mare, perhaps, has naturally a very tender mouth. Select a very thick, smooth bit, covered with rubber, and then handle her gently. If the mouth is yet sore, apply a mixture of olive oil and lime water, equal parts, and see to it that both the sore and the bit are kept scrupulously clean. It would be best, of course, not to use the animal until the sore mouth has healed.

Rattling in the Head.—B. P. C., Benton Harbor, Mich., writes: "I have a cow troubled with a rattling, or wheezing, which seems to be wholly in her head. It seems to be worse in cold weather."

ANSWER:—I cannot give you the desired information. There are too many possibilities. The "rattling" may be caused by a chronic catarrh, by a polyp, or by some other morbid growth somewhere in the respiratory passages, or by something else, and finally, it may not be in the head at all.

A Swelled Leg.—O. M. M., West Spring Creek, Pa., writes: "I have a valuable horse which had mud fever about two months ago, in the right hind leg, and I doctored and cured him, but it left an enlargement of the joint. The outside is hard, but he is not lame. Can the enlargement be taken off?"

ANSWER:—You may possibly succeed by applying steady pressure by means of judicious bandaging. Use woollen flannel for bandages, and commence bandaging at the hoof. I do not recommend you any salves, because in the hands of the inexperienced, often more damage than good results from their use.

Probably Founder.—J. H. W., Mountain Glen, Ill. Your statement that your mule stands a little drawn up, with his hind feet close together, extended well under towards his front feet, indicates that the animal endeavors to concentrate as much as possible the weight of the body upon the hind feet, so as to relieve the fore feet. Hence, if you make a close examination you very likely will find that the seat of the trouble is in the fore feet. It seems to me your animal suffers from a slight attack of laminitis, or founder.

Influenza.—W. D. P., Ovriskel, Mich., writes: "I have a horse that has what I think is epizootic. She discharges freely from the nose a yellowish matter, coughs much and cannot drink. Her pulse is weak and irregular and hair rough."

ANSWER:—The best that can be done in a case like yours, evidently a rather severe case of influenza, is to immediately consult a competent veterinarian, and to entrust him with the treatment, which, in influenza, depends upon the symptoms and the stage of the morbid process.

Abscess in the Mammary Gland.—A. E. B., Mountain View, Mo. Examine the abscess cavity either with a probe or by inserting a finger. If the opening is large enough, see to it that the pus and exudates have a proper exit and can be discharged from every point; this done, fill up the whole cavity with absorbent cotton that has been saturated with a 4-per-cent solution of pure carbolic acid. Re-

new the application twice a day until the cavity is filled up with granulations and the abscess is healing, and do not forget to keep the affected parts clean.

Colic.—E. P., Ajax, Oregon. Your filly, it seems, died of colic. As colic does not signify a single definite disease, but is applied to all diseases which manifest their presence by symptoms of violent pain in the stomach, intestines or peritoneum, to answer your question intelligently would compel me to write quite a lengthy treatise, for which there is no space in the FARM AND FIRESIDE. I therefore advise you to write to the Director of the Ohio Agricultural Experiment Station and ask him to send you Bulletin 2 of Vol. II, for April and May, 1889, in which you will find the desired information.

Insufficient Vitality.—H. H. R., Palopinto, Tex. It sometimes happens that a colt becomes diseased before it is born, and although born alive and fully developed, does not possess sufficient vitality to live. Of course, nothing can be done with such a colt but to let it die. Whether or not its disease might have been prevented by a different treatment of the mare before parturition, is a question which it will be very difficult to answer. You seem to have made the post-mortem examination a considerable time after the death of the animal.

Coughing.—E. C. R., St. Mary's, W. Va. It is impossible to prescribe any treatment as long as the nature of the ailment is not known. In your case the seat of the trouble is probably in the larynx, or in adjacent parts, but its nature can be ascertained only, if at all, by a careful examination by a competent veterinarian. There are a good many possibilities. Even bots, the larvae of *Gastrophilus equi*, fastened to the larynx, may produce just such symptoms as you describe, and almost any morbid growth or tumor, situated in the larynx or adjacent parts, may have a similar effect.

Worms in Pigs.—H. C., Millville, Mass. Your pigs are probably full of worms, but whether they are ascarides or eschinorrhynchi, I cannot decide. Probably the latter, which are not easily affected by any vermifuge. Still, if you wish to make an experiment, you may give, mixed with the feed, some decorticated castor beans, one ounce for a medium-sized pig or half an ounce for a small pig. In order to prevent the invasion of the worm brood, it is necessary to keep the animals in clean quarters; see to it that the troughs, etc., are kept clean, and that no water is given except from a good well. Besides that, the animals should not be allowed to run out.

Sore Shoulders.—G. F., South Rockwood, Mich., and A. D. R., Millington, N. J. First, see to it that the harness, but particularly the collar, fits the horse. Secondly, keep the harness, but particularly the collar, scrupulously clean and free from sweat, dirt, etc. Thirdly, see to it that the animal is well cleaned every time the harness is taken off. Fourthly, do not let the horse stand in the stable with the harness on, but remove the latter every time the animal is resting or eating. Finally, if in spite of these precautions the skin should become sore, apply to the sore places every time the harness is put on and taken off, a mixture of pure olive oil and lime water, equal parts.

A New Hoof.—W. J. S., Leedstone, Minn., writes: "I have a mare which got hurt in one fore foot about a year ago, and has grown a new hoof. She has gone lame ever since when driven on a hard road. She ran away and broke the pole, and a silver off the end ran into her foot just above the frog. It healed, but does not grow healthy as before."

ANSWER:—The new hoof, probably, is composed of abnormal horn; in other words, is a morbid production. Nothing can be done but to protect the same as much as possible by judicious shoeing and by using the animal only on the farm, and not on hard and rough roads. Keep the animal out of muddy places as much as possible.

Lameness.—A. W. B., Ithaca, N. Y. Bone spavin has its seat in the small bones of the hock joint, and, as a rule, causes lameness. Bog-spavin consists in an enlargement of the capsular ligament, presents itself as an elastic swelling on the anterior part of the inside of the hock joint, and is seldom attended with lameness. Blood-spavin is a name applied to an enlargement of the vein on the inside of the hock joint, the vena saphena. Concerning the treatment of spavin and the prospect of affecting a cure, I have to refer you to the already numerous answers given to inquiries about spavin. Your other questions I cannot answer, because to answer them requires a thorough examination of the animal.

Sheep-rot.—E. T. W., Fosterville, Tenn. The name rot, or sheep-rot, is principally applied to that disease of sheep which is caused by the presence of fluke-worms. Distomum hepaticum and distomum lanceolatum, in the liver, but a mucous discharge from the nostrils, is not one of its principal symptoms. Where such a discharge constitutes the most conspicuous symptoms, it is more likely that the disease is caused by lung-worms, strongylus filaria in the bronchial tubes, or by the presence of the larvae of oestrus ovis in the nasal cavities, the frontal and maxillary sinuses, or even the ethmoid bones. There is no cure for worms in the liver or in the lungs. The prophylaxis consists in keeping the sheep away from low and wet places and places that contain pools, etc., of stagnant water, because in such places the worm brood is taken up.

A Diseased Hoof.—J. N. M., Killbuck, O., writes: "I have a fine, two-year-old mare which, about a month ago, bruised her heel in some way while in the field. The bruised part became very sore, and the leg swelled terribly. The hoof is beginning to crack at the heel, and looks like it might come off."

ANSWER:—Cut away, with a sharp hoof-knife, all loose horn, and if there is any suppurating, see to it that the pus can be discharged and cannot burrow down anywhere. This done, dress the sore twice a day with iodoform, absorbent cotton and a well-applied bandage. No more poulticing. If a new hoof should form, you must keep the same banded until fully developed; otherwise the horn of the new hoof will be brittle and scaly. The bandage must be renewed twice a day. The production of an entire new hoof requires a long time—from ten months to a year.

Probably a Degeneration of the Caruncle.—W. C. M., Deerfield, Kan., writes: "What shall I do for my colt? About six weeks ago I noticed a lump on its eyeball, near the corner, about the size of a grain of wheat. Now it is as large as a pea. The color is pink. There is a film of whitish color extending a short distance from the lump."

ANSWER:—What you complain of may be a degeneration of the lacrymal caruncle, a comparatively rare occurrence. If it is, the treatment may require an operation, which, however should, under no circumstances, be performed by any one except a skillful surgeon. Still, your description is rather indefinite, and therefore makes it difficult to decide whether the pinkish "lump" is a degenerated caruncle or simply a product of exudation on the cornea. The best, therefore,

you can do is to have your animal examined by a veterinarian or a physician familiar with eye diseases.

Corked—Anchylolysis.—R. E. H., Deerfield, —, writes: "I have a seven-year-old horse that was hurt in plowing. He had on a pair of heavy shoes, and on turning him around he stepped on his other foot, causing a bad wound just above the hoof on the front foot. I let it run for six months or more without attending to it. Now it is a very bad looking sore, having grown some since I quit doctoring it. It has been there a year and a half. Can you give me a remedy?—I also have a horse that has been running out for the past six months. I found that he was lame in the hind leg. I also noticed a sore just above the hoof on the inside of his foot. I went to doctoring him and healed up the sore place, but now I find that the joint just above the hoof seems to be stiff. Can you give me any light on the subject?"

ANSWER:—Your first case, that of the corked animal, might have been easily cured in the beginning if it had received proper attention. As it is now a year and a half old, I have no idea what changes may have been produced by the morbid process, the use of caustics, the burrowing of the pus and exudates, etc., and I fear it is incurable. At any rate, if yet anything can be done, a surgical operation or operations will be necessary, and therefore I cannot but advise you to entrust the treatment to a veterinarian, who can determine, by examining the animal, what can and what ought to be done. As to your second question, the case is very plain. The wound extended to the joint; the latter, probably, was opened, and when the wound finally healed, anchylolysis was produced. Nothing can be done. Like in the first case, "too late!"

Enlargement of the Nasal Bones.—J. H., Arcadia, N. C., writes: "A mare three years old has enlargement of the nasal bones, about half way between the eye and nostril on each side. It was first noticed about twelve months ago, and has gradually increased in size. She has a colt eight months old. Her appetite and condition are fair, and she is full of life and animation. There is not now and never was any unusual discharge from the nose. The nasal mucous membrane is healthy in appearance as far as can be seen. When she neighs or snorts, the sound is somewhat muffled. In going up hill or through mud, the breathing is labored, owing, I think, to obstruction in the nasal passages."

ANSWER:—I think you are right. There is undoubtedly some obstruction in the nasal cavity, the nature of which must be ascertained by a careful examination. The latter will be considerably facilitated if the rays of the sun are reflected up into the nasal cavity by means of a small mirror. Whether anything, and what, can be done to remove the obstruction, perhaps a fibroid, a sarcoma or a so-called polyp, will depend upon the result of the examination, or, in other words, upon the nature, the size, the shape and the situation or accessibility of the obstruction.

A Cyst-like Swelling on the Poll.—C. L. B., East Liverpool, Ohio, writes: "I have a six-year-old horse that has a lump on the top of the head directly behind the left ear, about as large as the top of a cup. I first noticed it in the fall, but thought it would go away. It is soft, but not sore, when the horse is not reined up; otherwise it is hard only when in the act of drinking from the watering trough, when it is not visible. I at first supposed it was from the sting of an insect or blow of some kind."

ANSWER:—What you describe can hardly be called a poll-evil, although if not properly treated, or if injudiciously opened, it is apt to become one. The swelling contains fluid and perhaps, also, solid exudates, and either has to be left alone or else, if a cure is desired, it has to be opened, and then, before all the contents have been discharged, a contra opening at the lowest place has to be made and a string has to be drawn, like a seton or rowd, through both openings. This done, the cystic wall must be destroyed by injections of a concentrated solution of sulphate of copper, to be made once or twice a day until the object stated has been accomplished. Hence, how long these injections have to be continued (usually a few days) must be left to the judgment of the person who administers the treatment. After the injections have done their duty, they must be discontinued, or, at any rate, a very much diluted solution only must be used; the string must be removed and the wounds be allowed to heal. The parts, of course, must be kept clean, but whenever sulphate of copper is used, no soap must be applied; only warm water.

\$100.00 FOR \$1.50.

J. B. Cray, Millersburgh, Ky., writes, "I removed Bunch from stifle joint on my horse with half a bottle of Quinn's Ointment, everything else having failed. The investment made me \$100 in sale of horse." For Curbs, Splints, Spavins, Windpuffs and all Bunches, it has no equal. Trial box 25 cents, silver or stamps. Regular size \$1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

THE exports of mutton during 1890 were over 3,000,000 carcasses, being about fifteen times greater than in 1883.

BERRY SHIPPERS.

Write C. W. Flick & Co., wholesale fruit dealers, Springfield, Ohio, for stencils.

EGGS Silver laced Wyandottes, 13¢ per 100. Satisfaction guaranteed. CULLY & CO., Willshire, O.

THE ANCHOR FENCE POST

CHEAPEST, STRONGEST, HANDIEST

AND MOST DURABLE FENCE POST BOTH FOR ORNAMENTAL AND FARM PURPOSES

Suitable for any Metal fencing.

For Prices and Estimates on Fencing Send to

ANCHOR POST CO.,
59 WEST 42nd ST., NEW YORK.

Our Miscellany.

DULCE DOMUM.

EMILE PICKHARDT.

I went abroad to seek for fame—
Lo! weary, empty, back I came;
To guide my bark to where she stood,
I needs must cross a sea of blood.

I wandered forth to seek for gold,
But soon returned to native fold,
For when I'd come to where it lay,
Lost human souls obscured the way.

Again I rose, one idle hour,
And issued forth to seek for power—
Alas! On writhing bodies, prone,
Of quivering hearts he'd built his throne.

Again, for pleasure I made quest,
To soothe my spirit's wild unrest,
But soon returned, for where she led,
The way was strewn with tangled dead.

Once more I turned, in hope, my helm
To seek contentment's blessed realm,
But now no more abroad I roam—
This choicest prize I found at home.

—Islington, Mass.

THERE are 208,749 railroad bridges in the United States, spanning 3,213 miles.

THE highest railroad bridge in the United States is the Kinzua viaduct, on the Erie Road—305 feet high.

THE English postal authorities have introduced nickel-in-the-slot machines for the sale of postage stamps. Not at all a bad idea.

BEECHAM'S PILLS cure Bilious and Nervous Ills.

THE earth's 1,500 millions of human inhabitants speak 3,034 different languages and possess about 1,000 different religious beliefs.

LISTEN TO THE PRUDENT ADVICE, which urges you to the immediate treatment of that Rasping Cough by the use of Dr. D. Jayne's Expectorant, the best of medicines for Coughs and Colds, and an approved stand-by for all Pulmonary troubles and Throat-ails.

STATISTICIANS estimate that there are over 3,000,000 women in this country who are engaged in work which is not domestic. Of this number 275 are ministers and 75 are lawyers.

A BILL is to be introduced in the Maryland legislature, levying a special tax on bachelors. Marriage is a public institution, and why should bachelors be excused from helping to support it?

WE will mail free to any address, a copy of our Home Treatment, a positive cure for Leucorrhoea, Whites and all Female Weakness. Send self-addressed, stamped envelope. May Flower Med. Co., 85 Lake St., Chicago.

KANSAS will soon be in shape to furnish all her own condiments. The salt beds near Kanopolis are producing vast quantities, and Senator Ingalls' new novel is expected to furnish all the pepper and vinegar that is needed in the State.

THE physicians all say that one of the best safeguards against bronchial troubles and colds in the throat is to keep the mouth closed when walking, and breathe through the nose. The habit is worth cultivating on general principles.

THE quality of the butter fixes the price. It is better to make a pound of choice butter than to market two pounds of inferior butter. If as much care were used in caring for the cream, churning and packing as in feeding and milking, more profit would result.

THE census of live-stock in France, taken by order of the French agricultural department, enumerates: Cattle, 13,104,000; sheep, 22,619,000; swine, 5,881,000; horses, 2,711,000; goats, 1,483,000; mules, 238,000; asses, 387,000. This is an increase in all classes, compared with last year; in cattle the increase amounts to 1,658,000 head.

FORTY YEARS AGO TO-DAY.

The Pioneer Newspaper Agency of S. H. Parvin's Sons was established in Cincinnati on the 27th of March, 1851, forty years ago. It has kept pace with the advancement of civilization and the demands of the times. From a small beginning the business has gradually grown into one of immense proportions, having unlimited credit with the entire newspaper press of the United States, Canada and foreign countries.

One noticeable feature is the fact that during all these years having maintained a high standard of integrity, the Parvin Agency have, through fair dealing, gained the confidence and good-will alike of both advertisers and publishers, thus enabling them to secure for their many patrons the most favorable consideration at the hands of publishers.

The success of such a reliable firm is chronicled with pleasure. The Parvin Agency, infused with the spirit of progressive men of experience, and a thorough knowledge of the advertising field, has gained for them a world-wide reputation and produced fortunes for many of their customers.

After forty years of creditable business experience in the field of advertising, the firm of S. H. Parvin's Sons deserve the hearty and cordial recognition, as well as congratulations, of the entire press of the country.—Cincinnati Enquirer, March 27, 1891.

ATLANTA, Ga., is believed to be the only city in the United States which has a house constructed wholly of paper from foundation to turret.

THE total production of white pine lumber in the northwest during the past season was 4,068,285,584 feet, an increase over the previous season of 596,700,146 feet.

ST. Paul working women are organizing a women's labor lyceum. They meet Thursday evenings, and discuss questions relating to their condition and methods of improving it.

BALTIMORE leads the country in the manufacture of overalls. In that city 5,000 women are employed in this industry. Their wages run from \$3 to \$8 per week, with a general average of about \$6.50.

MRS. MARY BRAYTON YOUNG, who has just died, was the heaviest mill owner in Fall River, and possessed an estate worth \$12,000,000; yet had no vote in Massachusetts. Such a fact will read strangely one of these days.

ONE of the largest forests in the world stands on ice. It is situated between Ural and the Okhotsk sea. A well was recently dug in this region, when it was found that at a depth of 116 meters the ground was still frozen.

AN instance in enormous rise in values in Butte City is commented on. A month or two ago a certain mining property was recorded as transferred for \$150. Only a few weeks thereafter the same property was bonded for \$7,500,000.

THE FAMOUS \$7.00 PALACE LOUNGE.

Our readers will find in this issue the advertisement of the Palace Furniture Co., of Cincinnati, O., who manufacture the famous \$7.00 Palace lounge and \$11 Bed lounge and a full line of all kinds of household furniture. They sell the goods direct to the consumer, and their prices are far below any we have ever seen. Write to them for their illustrated catalogue containing full description and net cash prices of their goods; it will pay our subscribers to order from them.

MR. PILLSBURY, of flour fame, it is reported, has, together with a Scotch capitalist by the name of MacDonald, purchased two thousand acres in Minnesota, and will devote the same to the cultivation and growing of flax. The same gentlemen are also about erecting the Minneapolis Linen Mills, which are calculated to give employment to two thousand hands.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 820 Powers' Block, Rochester, N. Y.

Good Words from Our Subscribers.

CAMAS VALLEY, OREG., Feb. 4, 1891.

I have received my machine, and after giving it a thorough trial, I write to inform you that I find it all that it is represented to be, and I am perfectly satisfied with my bargain. Several of my neighbors think of sending for one this year. There are machines in the neighborhood that cost \$65, that do not do as nice work as this one. I think it makes the most perfect stitch, on both sides of the cloth, of any machine I ever saw. I think of trying to get up a club and send for the dishes you offer as a premium.

MRS. A. B. C. WHIPPLE.

STROTHER, Mo., March 2, 1891.

Please accept my thanks for the Cook Book. Am delighted with it. BETTIE MASON.

WABUSKA, NEV., MARCH 6, 1891.

I just want to say to you that the Atlas came in due time, and to say that I am pleased with it does not fully express my opinion of it.

H. F. SWASEY.

HILLSGREEN, CAN., Feb. 23, 1891.

I received the Modern Cook Book. Thanks for the same. It is actually better than we expected. JOSEPH HUDSON.

EMMITSBURG, Md., Feb. 11, 1891.

I received the two pictures, Christ Before Pilate and Christ on Calvary. I am so pleased with them that I would not take ten dollars for them. I have them both in deep frames.

B. G. BYERS.

BELOIT, OHIO, Feb. 23, 1891.

The Sewing-Machine arrived here all right. I am well pleased with it. Thanks for your kindness and punctuality in sending it.

MARGARET B. STANLEY.

MIDDLETOWN, N. J., March 7, 1891.

Received picture, "Christ on Calvary," all right yesterday, and like it very much. Consider it very fine. Please accept thanks.

GARRET S. LUYSTER.

CEDARVILLE, N. J., Feb. 21, 1891.

I received your paintings, Christ Before Pilate and Christ on Calvary, in good order. They are all they are claimed to be. Would not take \$50 for them if I could not get others in their places. CARL W. NEWCOMB.

NEW
GIANT
JUNIOR GIANTFLOWER
BRANDSFor Sale
Everywhere.

DEERING MOWERS

DEERING BINDER TWINES

WM. DEERING & CO.
CHICAGO, U. S. A.SAVE GRASS
THAT
OTHERS
LEAVE.SUIT EVERY
PURSE AND
EVERY TASTE

DANNEBROG, NEB., February 15, 1891.

The Atlas came to hand. It needs no puffing, because any one who takes a careful look through the pages and maps will soon find that the Atlas publishes its own value. My boys would not take a dozen of the geographies that are used here in our school for it. Just what we need in our house.

P. M. HANSEN.

SYRACUSE, N. Y., March 18, 1891.

Received the Cook Book and Younan's Dictionary of Every-day Wants all right. Am very much pleased with both.

MRS. W. C. METCALF.

BRUNSWICK, OHIO, March 11, 1891.

I would not take \$5.00 for the picture, Christ Before Pilate, if I could not get another.

W. A. PECK.

OILVILLE, VA., Feb. 17, 1891.

The Sewing-Machine is splendid, and works like a charm. I was surprised to find it so much better than the one I had been using. The freight was but seventy-two cents. Will try and send another order soon.

MRS. A. J. HICKOX.

PIQUA, OHIO, March 9, 1891.

I beg to acknowledge receipt of your Modern Cook Book and the FARM AND FIRESIDE. The Cook Book is splendid, and I am well pleased with it. I do not see how you can furnish it so cheaply. I think the paper alone is worth more than the price paid for both.

MINNA CARSON.

12 PKTS. FLOWER SEEDS 10c.

CLEVELAND'S PAT. BASKET AND BOX CARRIER. Carries two baskets as easy as one. Sells on sight. Agents wanted. Send 20 cts. for sample and terms to NESLER MFG. Co., Newark, N. J.

A GREAT SEED SACRIFICE.

A \$10,000 Loss turned to your Gain.

CHOICEST FLOWER SEEDS come from France and Germany; some rare varieties often bringing a dollar for a single seed. A large importing house had an immense shipment of the finest grown seeds ever brought to America, and, as you see, in unloading at the pier, an awful accident occurred. Now, as each kind must be put up in small, separate packets, this would have been a complete loss, but hearing of it, and knowing its value, we bought the whole cargo of exquisite flowering seeds, getting in the whole assortment some of the highest cost kinds ever grown. We have thoroughly mixed them, all kinds, and put them up in elegant packets, containing over 20 varieties, to give away as premiums to COMFORT. All you have to do is to sow them in a box, and when they get large enough to transplant, you can set them out, and have a most elegant flower garden for nothing, and, as the rarest seeds are mixed in, you obtain what has sold for dollars and dollars for nothing, and in the Summer and Fall can pluck beautiful bouquets of Pansies, Petunias, Asters, as well as the many rare flowers here shown.

Special. Having found a box of LATE-EST-ORANGE-CHRYSAANTHEMUM seed in the lot all safe, we are going to enclose one package of this popular seed also.

OUR OFFER is this: To every one sending us 12 cents for a 3 months' subscription to COMFORT, we will send perfectly free, postpaid, these packets of seeds and our ELEGANT BOOK OR MANUAL, as a guide to the culture of all flowers and plants. Its many pages are loaded down with practical hints and helps to everybody, on all sorts of plant life, and describes how to arrange fancy window and garden decorations; is worth a half-dollar to any one, but, being determined that you and all your friends shall have COMFORT 3 months longer, we give all 6 of these free if only 12 cents is sent to pay postage and expense. 6 subscriptions and 6 lots for 60 cents.

\$100.00 CASH GIVEN AWAY! BEST YET. To the person sending in the greatest number of these 12-cent subscriptions, at rate of 6 FOR 60 CENTS, before June 1st, we give a cash present of \$50.00; to the second largest, \$25.00; to the third, \$15.00; to the fourth, \$10.00. Remember, you get 12 cents for each lot, and send us 10 cents at club rates, then you also stand a chance to secure your part of the ONE HUNDRED DOLLARS. Can any Publisher be more liberal than this? Send your 12 cents to-day for sample lot of Seed Packets, Manual and Magazine, then get up club. Address MORSE & CO., SEED DEPT., Augusta, Maine.



HILLSBORO, VA., March 16, 1891.

I received your beautiful picture, Christ on Calvary, promptly, and allow me to thank you for it. In regard to the picture, I will say that it is truly a fit companion to that superb one, Christ Before Pilate. I think they are beautiful pictures, and I am well pleased with them. Would not part with them.

VIRGIE E. UNDERWOOD.

MAYSVILLE, KY., March 10, 1891.

Many thanks to you for sending me your premiums. I received the Cook Book several weeks ago, and the Peerless Atlas came last week. I cannot see how you can be so liberal, as the FARM AND FIRESIDE is worth more to any person than the price I paid you, without the premiums. I bought a cook book about one year ago and paid one dollar for it; but my wife says she would not give yours for the one I bought to-day. The Atlas I am fairly pleased with, and would not take five dollars for it if I could not get another.

W. H. DERSHILL.

DINSDALE, IOWA, March 10, 1891.

I received the Peerless Atlas last night, and to say I am well pleased with it hardly expresses my opinion of it. It is fully up to the standard, and is neat and well printed, giving much information to any one, and is worth ten times its cost.

W. H. WEILER.

YOU CAN GET
THIS PAPER
ONE YEAR
FREE

We make this liberal offer, as follows:

ANY PERSON can have this paper one year free by sending us one NEW yearly subscriber at the regular price, 50 cents a year for the paper alone.

Notice the following conditions:

A NEW subscriber must be a person whose name is not now on our list, and must be a person whom you have sought out and solicited to take the paper and who has consented to receive it. A change from one member of a family to another is not securing a NEW subscriber.

Accept this offer at once, as we may withdraw it. The offer is good now.

All subscriptions of present subscribers advanced one year from date on label.

When any one takes advantage of the above offer, the person securing and sending the new subscriber is not entitled to any other premium or reward except one year's subscription to this paper, but the new subscriber can take any premium offered in connection with the paper, including the premium wanted; for example, the regular price of the Peerless Atlas and one year's subscription to this paper is \$1. The new subscriber can have the paper and the Atlas by paying \$1, and the person that goes out and hunts up the new subscriber can have this paper one year free as a reward for his trouble, but is not entitled to any other premium or reward.

The above offer applies to this paper only, and all subscriptions must be for this paper.

We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

Please examine your Address Label, and if
YOUR SUBSCRIPTION HAS EXPIRED,
or is about to expire, please

RENEW AT ONCE.

Our subscribers will oblige us very much, and save us time and trouble in keeping accounts, if they will be so kind and thoughtful as to renew at least two weeks before their time is out, and thus avoid missing a number. We cannot keep back numbers, because our subscription price is so low that we cannot afford to hunt up back numbers.

The only sure way to avoid missing a number is to renew two weeks before your subscription expires.

Smiles.

WHAT I WOULD DO.

If I were a rose
On the garden wall,
I'd look so fair,
And grow so tall;
I'd scatter perfume far and wide,
Of all the flowers I'd be the pride.
That's what I'd do,
If I were you,
Oh, little rose!

If I were a bird,
With a nest in a tree,
I would sing a song
So glad and free,
That birds in gilded cages near
Would pause my wild, sweet notes to hear.
That's what I'd do,
If I were you,
Oh, gay, wild bird!

Fair little maid,
If I were you,
I should always try
To be good and true;
I'd be the merriest, sweetest child
On whom the sunshine ever smiled.
That's what I'd do,
If I were you,
Dear little maid!

MAKING IT PLEASANT.

OWING to a confusion of names of stations, I got off at the wrong one in Tennessee, and as there was no public house in the hamlet, the station agent said I could go home with him. His home was an humble one, as seen in the darkness, and as we reached the gate he halted and said: "Stranger, perhaps I ought to tell you—" "What?" I asked, as he hesitated. "Well, never mind. Come along in." He took me into the front room, which did not seem to be much used by the family. As we entered there came a loud yell from an adjoining room, and he explained: "It's only my wife hoxing the oldest gal's ears for sassing her. Let me take your hat." He had scarcely taken it when a boy was heard whooping, and he explained: "It's only my wife pulling young Tim's hair for not bringing in the night wood." The whoop was followed by a yelp and a howl, and my host calmly explained: "One o' the dogs got in the way, you see, and she lifted him."

I was trying to make his position a little less embarrassing, when there were two yells in quick succession, followed by a scramble, and he crossed his legs and remarked: "The twins was probably hooking vittles off the table and got caught at it."

Half a minute later, just as I had got ready to ask about the crops in that locality, the door was hanged open and a woman, who had a fork in one hand and a baby on her shoulder, hounded in and shouted out: "You onery, lazy Jim Murdock, if you don't help take keer of those brats I'll—I!"

She saw me and stopped and retreated, and when she had gone the husband explained: "That's what I was going to tell ye at the gate—that ye'd have to take chances on her being in a tantrum. She's got one, and if you don't mind being called squint-eyed, bald-headed, gander-shanked and hump-backed, and if you can kick the dogs off when she sets 'em on, and put up with the children climbing over you, I'll try and make it pleasant otherwise."

A WIDE-AWAKE DOMINIE.

One of the best double puns we have ever heard was perpetrated by a minister who had just united in marriage a couple, whose Christian names were respectively Benjamin and Ann.

"How did they appear during the ceremony?" he was asked.

"They appeared both Anni-mated and Bennie-fited," was the clever reply.

PREPOSTEROUS.

Gay—"I feel like a new man to-day."

Bright—"Do you? Glad to hear it. Perhaps you can see your way clear to pay that little bill."

Gay—"I'm a new man, I told you. You can't expect me to assume the liabilities of the old concern."—*Boston Transcript.*

ALWAYS READY.

"Did the plumber come down to inspect the pipes this morning?"

"Yes."

"What did he say?"

"He said there was nothing the matter, but he could very soon remedy that."—*New York Sun.*

VERY NEARLY RIGHT.

Druggist—"I have been trying to make an imitation of High Rock mineral water, and I think I have succeeded at last. Taste that."

Dinwiddle (after a small drink)—"It needs another old shoe and two superannuated tomato cans to the cask."—*Chicago Inter-Ocean.*

AN EARTHLY PARADISE.

Bustle—"I thought the Boomtown people were in love with their new minister; I hear he is going to leave."

Hustle—"Yes; but he told the people they were going to perdition; and we thought if outsiders got onto it, it would hurt the town."

FAST ENOUGH, IN ALL CONSCIENCE.

Irate customer—"You said this cloth was a fast color, yet it faded out in two weeks after it was made up."

Dealer—"Well, I don't think you ought to expect it to fade any faster than that."—*Chicago Inter-Ocean.*

A SOLICITOUS DAUGHTER.

Old gentleman (at head of stairs)—"Sally, ain't it time to go to bed?"

Sally—"Yes, father dear, don't put it off another minute; your health, you know, is not robust."—*Life.*

LITTLE BITS.

When two souls have but a single thought, they should stop spooning and take up study.

Mrs. Oldfidget is much worried about her daughter. The other night she kissed her, and the young lady murmured in her sleep: "Oh, Charlie, you've shaved off your mustache!"—*Binghampton Republican.*

Sam Johnsing—"I'se all right now. I'se gwinter get up."

Mrs. Johnsing—"Fool, niggah. Jess you stay in bed until you has tuck de rest oh de medicine in dat hottle what I paid a dollar for."—*Siftings.*

"Why, Franky," exclaimed a mother at a boarding house, "I never knew you to ask for a second piece of pie at home."

"I knew it wasn't no use," said Franky, as he proceeded with his pie-eating.—*The Christian at Work.*

When asked by the trembling young man to "share his humble lot with him," it would not be out of place in this practical age for the young lady to inquire gently whether the lot has a good house on it with all the modern improvements.

"Uncle John," said little Emily, "do you know that a baby that was fed on elephant's milk gained twenty pounds in a week?"

"Nonsense! Impossible!" exclaimed Uncle John, and then asked: "Whose baby was it?"

"It was the elephant's baby," replied little Emily.—*Toronto Empire.*

An old man who takes out ash barrels for a family in Newton, was suspected by the mistress of the house of having stolen some tamarinds she had in the cellar. She sent for the man to come and see her, and on being charged with the theft he replied: "Waal, I saw 'em, and I wanted 'em, and I took 'em, and I ate 'em, and they done me good." The last clause in the confession of theft was rewarded by the gift of more tamarinds.—*Lancer.*

Landlord Hooks—"Can you refer me to a work from which I can learn how the ancients constructed those catapults that would throw stones half a mile?"

Friend—"Don't believe I can. Why do you want such information?"

Hooks—"Well, you see, I've advertised that the house is within a stone's throw of the depot, and now I have got to rig up some plan for throwing that stone. I am enterprising, but I am not a liar."—*Munsey's Weekly.*

Enoch W. Jordan, a prominent farmer of Lee county, Ga., tells the following snake story: He was walking over his plantation when he came to a sow which had a fine litter of pigs. He found one of them absent. Going a short distance further he overtook a huge rattlesnake, which he promptly dispatched. He noticed that it seemed very large and was apparently gorged. Cutting it open, out jumped the missing pig, which, as soon as released from its close quarters, took to its heels and ran home.



Snag little fortunes have been made, work for us, by Anna Page, Austin, Texas, and Jno. Bonn, Toledo, Ohio. See cut. Others are doing as well. Why not you? Some earn over \$500.00 a month. You can do the work and live at home, wherever you are. Even beginners are easily earning from \$5 to \$10 a day. All ages. We show you how and start you. Can work in spare time or all the time. Big money for workers. Fail unknown among them. NEW and wonderful. Particulars free.

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FREE THE AMERICAN MUSICAL BOX LENGTH 10 IN. WIDTH 6 IN. FREE

Will Play 100 Tunes

To introduce them, one in every County or town furnished reliable persons (either sex) who will promise to show it. EXCLUSIVE MUSIC CO., P. O. Box 2126, N. Y. City.

THE PEOPLE'S KNITTING MACHINE.

Retail Price only \$5.00. Will knit Stockings, Mitts, Scarfs, Leggings, Fancy-work, and everything required in the household from homespun or factory yarn. Simple and easy to operate. Just the machine every family has long wished for. Send \$3 with your order; I will ship machine, threaded up, with full instructions, by express O. D. for balance, \$3, when machine is received. Large commission to agents. Circular and terms free. Address J. E. GEARHART, Clearfield, Pa.

If afflicted with sore eyes use Dr. Thompson's Eye-Water

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ACTING LIKE MAGIC on the vital organs, strengthening the muscular system, and arousing with the rosebud of health
The Whole Physical Energy of the Human Frame.
Taken as directed these famous pills will prove marvellous restoratives to all enfeebled by any of the above, or kindred diseases.

SOLD BY ALL DRUGGISTS,
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Prepared only by THOS. BEECHAM, St. Helens, Lancashire, England.
B. F. ALLEN CO., Sole Agents for United States, 365 & 367 Canal St., New York, (who if your druggist does not keep them) will mail Beecham's Pills on receipt of price—but inquire first.
(Mention this paper.)

PATENT Mirliton Harmonica

With this wonderful Harmonica you can play any tune, imitate any bird or animal, bagpipes, Pouch & Jody, etc. This Harmonica is the only musical instrument that anyone can play at a moment's notice without instruction. When used by minstrels and specialty artists, quartetts or choruses it invariably receives repeated encores. For the use of the hunter it is valuable, as any bird or animal can be so nearly imitated as to call them at once within range. All the various songs of the mocking bird, canary and other choice singers can be given so naturally that the most expert listener can not detect the difference. Just imagine the amazement of a company at the sudden singing of a bird, the squealing of a pig or the mewling of a cat, when it is supposed that none of these are in the vicinity. All the astonishing feats of the most expert ventriloquist can be performed by means of this most wonderful Patent Harmonica. A child ten years of age can play it without any instruction. We recently saw the most astonishing creation in a large company assembled in a private parlor, by what appeared to be the terrific barking of a dog, then suddenly a cat commenced a most unearthly squall in a closet while had not been opened for months, then a child cried out in great agony from the interior of a large book case, and a beautiful bird commenced singing in the corner of the room. Astonishment turned to fear until a boy was discovered in the corner playing the Patent Mirliton Mocking Bird Harmonica. This musical wonder, which has only been out a few days, is having an unprecedented sale in this city, and agents are fairly coming money, realizing from \$7 to \$10 a day. As soon as one is sold it becomes all the rage in the neighborhood, and all follow suit and buy them. Send for a sample, and feel sure that with the free advertisement they will give you your next order will be for a gross. Remember, this musical wonder is duly patented and copyrighted, and we control it. You can not buy them elsewhere. This wonderful instrument can be sent by mail, with full instructions which will enable any person to use it. We are sole agents and proprietors of this harmonica, and to introduce our goods in every county we will send you one sample of our Patent Mirliton Mocking Bird Harmonica for only 15c.; 2 for 25c.; 5 for 50c. Address W. M. WILLIAMS, 121 Halsted St., Chicago.

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ART in needlework is on the advance. We know the ladies delight in odd pieces of silk and satin. "CRAZY QUILT" making is VERY POPULAR. We are sure we have a bargain that all ladies will now delight in. Bright, handsome, odd-shaped, and pretty colored goods accumulate very fast at all NECKTIE FACTORIES; for years have been burdened and over-run with remnants of many RICH GOODS. We have thousands of pieces of silk and satin on hand which we are going to give you a big trade on. People at a distance have hard times getting the right assortment to put into sofa-pillows, quilts, etc., and we can help you out now. We are going to dispose of this immense lot EIGHT OFF. Our packages contain from 99 to 199 pieces of the best quality assorted goods, and we want to get a lot introduced into every home; then you can order as you like for your friends, and MAKE MONEY doing our work and helping yourself also. Remember these pieces are carefully trimmed, and especially adapted to all sorts of fancy art, and needlework in all its splendid varieties. Order one sample lot now for only 25c. It would cost many dollars bought at a store. GRAND OFFER: If you order our great assorted lot AT ONCE, we will give you, absolutely FREE, five skeins of elegant embroidery silk, all different bright colors. This silk is worth nearly the price we ask for the remnants; but we know if you order ONE lot we will sell many in your locality, so make this liberal offer. Three lots for 65c.; five for \$1.00. BEST WAY. We send one of the above complete assorted lots FREE to all who send 25 cents for 6 months subscription to "COMFORT," the best Home Monthly now published, or if you send for more than one lot as above, "COMFORT" goes for one year.

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This Weather Warning will faithfully forecast the weather for the ensuing 24 hours, so that you can get your own weather report without waiting for the newspapers to tell you what the weather report is to be. It is a cyclone warning. When the weather is going to be wet, a fine noble dog arises from his kennel back in the distance, and approaches the opening (see illustration above), giving a signal that there is a storm approaching, and as the storm subsides, or if it will be over during the next 24 hours, a butterfly in all its splendid colors, to tell you that sunshine is at hand, to gladden the hearts of mankind. The butterfly and the dog are made of metal in handsome colors. The front is handsomely decorated with fancy designs and figures. In the centre stands an accurate thermometer; the whole thing being so simple that a child will understand it at once. When the devastating hurricanes, cyclone and wind storms are approaching your home, this machine warns you long ahead, giving you time to prepare. It is a wonderful machine, and will save your life and many a dollar besides. It tells you whether you had better take your umbrella with you to-day. It tells a lady the weather, and she will know the most suitable dress to wear, etc. Enclose 50 cents to Morse & Co., Box 597, Augusta, Me. Mention Farm and Fireside when you write.

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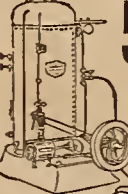
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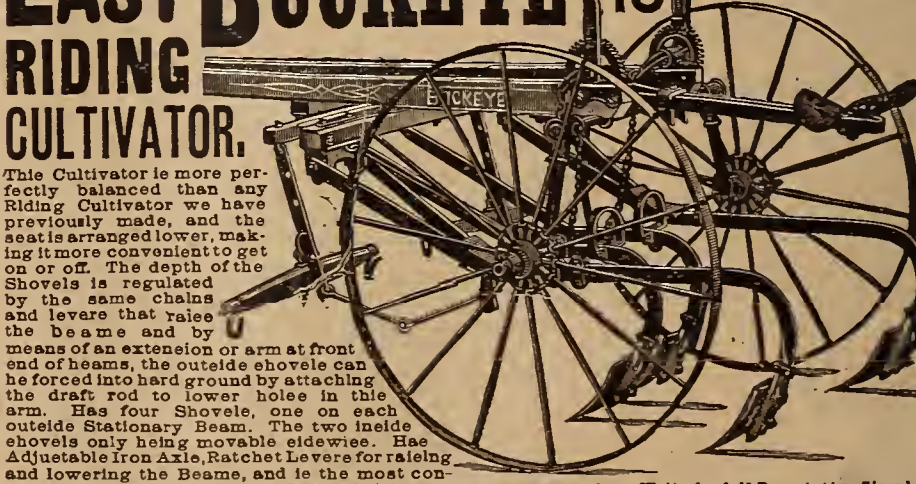


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This Cultivator is more perfectly balanced than any Riding Cultivator we have previously made, and the seats are arranged lower, making it more convenient to get on or off. The depth of the Shovels is regulated by the same chains and levers that raise the beam and by means of an extension or arm at front end of beams, the outside shovels can be forced into hard ground by attaching the draft rod to lower holes in this arm. Has four Shovels, one on each outside Stationary Beam. The two inside shovels only being movable sideways. Has Adjustable Iron Axle, Ratchet Levers for raising and lowering the Beams, and is the most convenient and easiest operated Riding Cultivator now on the market. Write for full Descriptive Circular.

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We sell direct to the consumer at factory prices, and by dealing direct with us you save dealer's profit. It is a duty you owe to yourself to get the most value for your money; then why pay a dealer \$25.00 more than we ask for the same quality of goods? We don't want your trade until you are satisfied that our goods are exactly as we represent them. Address **THE FOSTER BUGGY & CART CO.,** 71 West Fourth St., Cincinnati, Ohio.

FOSTER \$5.25 HARNESS OUR \$37.50 ROAD WAGON.



We give a guarantee with all Foster Buggies and Harness sold. Our reputation for good work at low prices is known throughout the country, therefore we can not afford to make any claims that we can not support. Our experience has been "A customer once secured is a customer forever." Write for our illustrated catalogue and join us in our efforts to kill off the pool and trust which is sucking the life-blood from the consumer.



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EASTERN EDITION.

VOL. XIV. NO. 15.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, MAY 1, 1891.

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Current Comment.

ADVOCATES of land loan schemes can find some information they are sadly in need of in the following extract from an article on the Argentine Republic, in the *Quarterly Register of Current History*:

The revolution of last July marked a reaction against a government upheld in the interests of speculators and gamblers, from the policy of which has resulted financial chaos. Ten or fifteen years ago there was little money in Argentine, and still less disposition to lend. To provide relief, the expedient of free cedulas was adopted. *Cedula* is a Spanish word, meaning bond or certificate. Two banks, the National and the Provincial, were authorized to issue these bonds. The cedulas have all the prestige of a state guarantee, but are based on no capital, and are a purely artificial means of propping up financial credit. The process of floating and redeeming them was briefly as follows: An owner of a farm could go to one of these banks, and in return for a mortgage on his property to the amount of one half of its appraised valuation, could obtain from the bank an equivalent amount in cedulas. These he could dispose of anywhere for what they would bring. His mortgage could be paid off with bonds of the same amount and class, purchasable anywhere.

Unfortunately, little provision was made for limitation or redemption of the issues, and the banks were allowed to flood the market with them. The climax of inflation was reached in 1888, the two leading banks by the end of that year having increased their issue to \$514,000,000. The volume of the national paper currency, too, was allowed to run up from 60,000,000 to 160,000,000; and to add to the trouble, suspension of specie payments by the banks was legalized, and the irredeemable paper was made a legal tender for debts and customs duties. The land boom of 1888 aggravated the evil by necessitating large issues of cedulas to enable speculators to pay the fabulous prices asked, with the result that, as the cedulas depreciated, land valuation rose proportionately, and became not only fictitious, but in thousands of cases fraudulently high. For years gold had been drained from the country in settling balances of trade created by excessive importations. The needs of the country had been prematurely anticipated. The national debt last year amounted to \$336,311,442, contracted mainly in construction of railways and public works, and establishing provincial banks. Interest on this debt consumes one fourth of the revenue.

The country found little relief under the administration of President Celman. The premium on gold had gone up by leaps and bounds. On April 7, it was 300; by July 10 it reached 320. The cost of everything was so high that the workman could hardly live. Business had become stagnant, and immigrants were leaving by thousands. On April 13, a public meeting of 15,000 citizens in Buenos

Ayres demanded a change. The ministry resigned, and Celman appointed Senor Uriburn minister of finance, but failed to support his policy. This led to the resignation of Uriburn, and with the appointment of his successor, Garcia, the premium on gold, which had fallen 75 points, again rose.

Discoveries of fraud in the customs, the issue of more paper money by the government and the disclosures of illegal issues of paper by different banks, increased popular distrust and financial disorder. The revolution of July followed. After it was put down, Celman was forced to resign. Under his successor various measures were tried for restoring a sound financial system to the republic, and finally it went back to the gold basis.

On December 20, the government showed inclination to accept the London proposal for conversion of the cedulas, arranged for by the issue of \$150,000,000 in 5 per cent gold bonds, guaranteed unconditionally, principal and interest, by the Province of Buenos Ayres, but not bearing interest till 1894.

Briefly, this is a history of a paper currency based on something else than gold and silver coin, with a per capita circulation large enough to satisfy the wildest theorist.

FROM every part of the country comes good reports of the condition of winter wheat. Beginning with last fall and continuing until the present, the season has been very favorable over the whole winter wheat area. Reports to the Department of Agriculture show that the condition of winter wheat is higher than it has been for nine years. Danger is to be anticipated in some quarters from the Hessian fly, but it is not very serious. Wheat is thrifty, stocky and well stooled out, so that it is in a better condition than usual to withstand the ravages of insect enemies.

The flattering prospects for a large crop of wheat are accompanied by conditions that insure good prices. Harvest will find this country with a very low reserve of old wheat on hand, and even if our next crop comes up to its present promises and turns out to be a very large one, it is most likely that it will all be needed and will be taken at good prices. The present outlook is a very favorable one. A big crop of dollar wheat would lift the farmers of this country out of the slough of despond and place them on the solid road to prosperity. Every line of trade and every channel of business would also be benefited.

The corn area of 1891 will doubtless be a very large one. The present high prices will stimulate production. Too many farmers had to buy dear corn this season, and they will make the greatest effort not to be caught again.

NOTHING in politics has made friends as fast as reciprocity. From the time it was embodied in the act passed by Congress several months ago, it has been steadily and rapidly winning its way to popular favor. The practical results of the application of the principle have dumbfounded the pestiferous demagogues who have been attempting to belittle it. Reciprocity is a double-edged sword. One edge is called retaliation. The United States can present that edge to Germany and say: "No pork, no beet root sugar," or to Spain and say: "No free flour to Cuba, no free sugar from Cuba." Canada wishes to secure a reciprocity

treaty with this country, but the trouble is the products she wishes to send us are agricultural products that compete with our own, and the principle is not applied on free trade lines just at present.

PROF. D. S. KELLCOTT, of the Ohio State University, Columbus, Ohio, kindly offers to answer entomological queries for our readers, as explained by the following letter:

"The Department of Zoology of this university has now a growing collection of entomological books and insects. These enable me to identify, in most cases, our injurious insects, and to give advice as to the means for meeting their ravages. This I am very willing to do for any one who will send me specimens and give such facts regarding them as they may possess. If you think such service will be useful to your readers, I shall be glad to have you inform them of my willingness to serve them."

THE following is a fair sample of a few letters that we have received on the money question "You say that all of our currency is based on gold and silver coin which have an intrinsic value of their own. Now, will you tell the readers the meaning of the word intrinsic? Please don't dodge, but give us the definition according to Webster. Then tell your readers that there is no money but fiat money. Gold and silver, without the fiat of law, are no more money than coon skins, sorghum or apple sauce. A debt is as effectually paid in fiat paper money as in fiat gold or silver money. A bushel of wheat has more intrinsic value than a wagon-load of gold. The act that made the greenbacks redeemable was a stupendous fraud."

Intrinsic, according to Webster, means "internal; hence, true, real, essential, inherent." In the Century dictionary, the latest and the very best, it is defined, "inherent; essential; genuine; belonging to the subject in its very existence; as the intrinsic value of gold or silver; the intrinsic merit of an action." The Century contains the following: "Fiat money, paper currency issued by a government as money, but not based on coin or bullion; paper currency containing no promise to pay coin, and therefore not convertible into coin." Also the following: "Money is adopted for the sake of convenience to facilitate the exchange of one kind of wealth for another, and as a standard of value. Its common form is that of a stamped metal currency; but in primitive times, among uncivilized peoples, and under special conditions by civilized people, many other articles have been used as money. Bank-notes, greenbacks, gold and silver certificates of the United States government, etc., all representing coin, are called *paper money*, and are used for convenience instead of the coin itself."

Our correspondent, like other advocates of fiat money, is bumping his head against a solid wall of facts and common sense. Erase the government stamp from a gold dollar and the metal can be exchanged for about a bushel of wheat at present prices. Erase the printing from a paper dollar, and the intrinsic value of the scrap of paper is so little that it could be exchanged for a very few grains only. It requires the government stamp to make money out of gold and silver pieces, but it is in-

correct to call them fiat money. Our correspondent must have been very hungry when he found out that a bushel of wheat had more intrinsic value than a wagon-load of gold and silver. He has been getting terms mixed, but the definitions will straighten him out.

It is quite noticeable that when people talk about fiat money they always want it to pay debts with. If they have a bushel of corn or a pound of sugar or a yard of calico to sell, they are willing to take gold and silver coin or their representatives in pay for it.

THERE is a growing demand for the election of United States senators by the direct vote of the people. The last election for senator in Illinois may serve how this can practically be accomplished while the people are waiting for an amendment to the constitution. As an amendment must be ratified by two thirds of the states before it can be adopted, it is likely to be a long time before the election of senators by the direct vote of the people becomes the law of the land. Let the state conventions of each political party nominate a senator to be voted for by the members of that party elected to the state legislature. This plan is a fairer one for the people than the one in general use; because, by each county convention instructing its delegates to the state convention, the minority party in each county can have some say in the choice of their party's candidate for senator.

The demand for the change in the method of electing senators is strengthened by the conviction in the mind of the people that a number of men have deliberately bought their way into the senate. But the mass of voters are no better than the men they send to the state legislatures. It would be more difficult for a millionaire to buy up the voters than to buy up the members of the legislature that belong to his party, only because the latter are few in number and are easily "corralled." The compromise plan named above will give better results than the direct vote of the people, until there are more improved Australian safeguards thrown around the ballot.

OHIO is not the only state in which there is a bold attempt to seize the magnificent appropriation made by the government for the benefit of agricultural colleges, and divert it from the purposes for which it was intended. The shameless grabbers are at work also in Rhode Island and Connecticut. If they succeed in these states in obtaining all or part of funds that do not belong to them, their example will be followed in nearly every state in the Union, and the generous gift to the agricultural colleges will be stolen, divided or frittered away. Are the farmers of these states going to stand idly by and let this thing go on? Stir up your representatives in the legislature and see that they prevent what is no less than a clear steal.

FARMERS of Ohio, attend the caucuses of your party this year and see no candidates for representatives are nominated who will not look after your interests in the state legislature. Select the man who will best represent the people, no matter whether he is a farmer, business man or a lawyer.

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Our Farm.

SILO AND ENSILAGE.



In the last issue I endeavored to explain the building of the plain, cheap, single-thickness, ceiling-board silo, and to show its peculiar merit over all other kinds of silos. If you give heed to these instructions, some day you will all thank me for them, providing it was the means of inducing you to adopt them. Equally important with this is the kind and quality of ensilage to be grown to fill them. For winter ensilage, there can be no question but that the largest variety of corn that can be grown in any country to near its full maturity, is the best that can be secured. Corn will produce the greatest number of tons of cattle feed per acre of any known crop; besides, the grain ration from it is ample for feed for cattle without any other kind of grain. When you feed a good, large, bushel-basketful of ensilage each night and morning to your cattle, you give them fully four quarts of corn, cob and all, twice a day, in its most perfect condition for animal food, being cooked up soft and warm and fresh from the silo pit. The perfect mastication of it by the cattle, and its easy digestion, makes it simply perfection.

There is no arbitrary rule that can be laid down for the cultivation of the corn crop to be used for this purpose, except this: You must so plant the corn in each locality and upon the different soils that it will grow to its greatest size and fullest development. On my southern farms in Tennessee, we must plant our corn in rows fully four feet or more apart, and the kernels from three to four feet apart in the rows, leaving the corn to grow like little trees (twelve to fifteen feet high), with from one to three large ears of corn on each stalk. Such thickly-planted corn as we often see in northern Ohio, with from three to five stalks in a hill, would not mature a single ear of corn, if so planted in Tennessee, in a whole ten-acre lot, but up here in Ashtabula county, some of our very best and easiest corn crops are grown by check-row planting, with hills four feet apart and four stalks to each hill. Consequently, I say every farmer must have common sense enough to grow his ensilage crop in that manner upon his own farm that will produce the greatest and best results. One thing is certain, however, in all places you can never grow a good crop of corn and weeds or barn grass together.

On my farm here we now have a three-row marker and plant in rows three feet,

eight inches apart, and with a Farmer's Friend corn-planter drill, I then, if we have excellent seed, plant the kernels twelve inches apart in the rows, but if the seed is not very sure I plant eight inches apart in the row, hoping one fourth of the seed so planted will not come. My usual crop then is over twenty tons of green-cut, ensilage corn, with fully one hundred bushels of ears of corn per acre, generally from one hundred and twenty to one hundred and forty. Last season (1890) was a very hard one to secure a big corn crop here, because the rainy season almost never came to an end or gave us a chance to cultivate the crop.

I prefer drill-planted corn to hill planting, and can secure greater crops on my farm by this method of cultivation. I plant the large variety of southern white corn, grown in all the warm southern states, and if planted early in northern Ohio and well cultivated, it will mature the crop so it will ripen for seed if thinly planted, as I have advised. This may not be the best seed to use, however, because when acclimated here, it reduces its size and deteriorates the corn. Therefore, as it only requires from four to five quarts of seed corn to plant each acre, I advise getting fresh seed corn from the South each season. Last year I planted very late on account of the wet weather (the 30th and 31st of May.) October 13th following, I harvested seed corn from the ten-acre field (one wagon load), and it will all grow; not a single kernel failed when tested in our flower-pots in the house this winter. This corn, the husks had begun to turn a little yellow, but the corn was not glazed real hard. Upon drying in a good, warm room, it has cured out perfectly hard for seed. But I dare not use it for reasons above stated, and shall plant the fresh seed from the sunny South every year. There are more stalks in the field that will have three good ears of corn on them than there will be without any.

The corn must be left as late as possible in the field, to secure its greatest growth and fullest development of saccharine matter. It requires this to make it perfect ensilage, and it costs nothing to let it stand and fully mature in the sunlight and air after you have completed the cultivation of the crop. Do not be in haste to harvest upon the first touch of slight, early frosts, for it does but little damage until it freezes hard enough to freeze the stalks.

The leaves of corn stalks have but little value; they do not at any time possess much saccharine matter. The stalk is the main receptacle and reservoir of sweetness for the plant, and it is a sad mistake of the sunny South to save little bundles of leaves and allow thousands of acres of the corn stalks to go to waste each season, and many times hog them down and burn them in the spring. The stalks are really the most valuable portion of the whole plant, and when utilized by packing in the silo, it adds wasted money to the farmer's pockets very fast. The leaves of corn are simply its means of gathering sweetness from the air and sunlight through the day, to deposit in the parent stem at night and early in each morning. Hardly a trace of sweetness will be found in corn leaves by a strict chemical test. Therefore, I say, be not in too great haste to harvest, but let the crop fully mature. The better and more generous cultivation you give it, the greater returns you have and the better quality.

One thing you must all observe in filling silos; the corn for ensilage must be moist enough to pack good and heat up quickly. If it happens to be a long, hot, dry spell, I should sprinkle on water when filling the pit, to make it quite wet. For two years past my silo filling has been done in rain storms cold enough to make sleet snow, and it does not hurt the ensilage a particle. It comes out perfect. Remember, it must be wet to pack good. I shall not claim for the silo that you will take out of it more food value than you put into it, but you will certainly take out the feed in its very best condition for mastication and animal digestion.

The great mistake in early ensilage was the immature crops which farmers filled them with. Thickly-planted corn for fodder or the silo is almost absolutely worthless. It does not develop the saccharine quality of the plant and is an utter failure. Any green crop like rye, oats, clover, etc., will make good ensilage if grown to near full maturity and finely cut

and well packed, in a moist condition, in the silo. But all such crops cost too much for this purpose and farmers had far better raise corn sufficient.

A good, large feed of ensilage twice a day (that is, night and morning), together with a noon feed of clover hay, makes a very perfect ration for dairy cattle, and is the cheapest feed that can be grown upon the farm. You have no corn husking to do, no going to mill, no miller's toll or grinding to pay, and the cost of cutting and filling silos is far less than the cost of a corn harvest in any other manner to save the grain; and not one single particle of the crop is wasted if you use the silos.

If you do not have clover hay to feed at noon, you can feed timothy hay or straw, and if you desire to practice the most rigid economy of the farm, you can feed every spear of straw and then bed your cattle with sawdust and leaves. You will have to do this if our country is ever reduced to the European peasantry condition that the rich monopolists are pressing upon you by oppressive legislation, and these economies might now well claim your special attention. It is the small items in detail of the farm that need saving to accomplish the greatest results. It is also the most profitable under any and all circumstances.

The harvest of a corn crop and filling of silos is the most accommodating harvest of the farm. If you are to use a power feed-cutter, you can let your corn stand in the field until it fully matures; then go at it with all the help you have; cut it down and lay it in large piles flat on the ground, six hundred to eight hundred pounds in a pile. It will remain there for two or even four weeks and do no harm. For the past three years my crop has lain on the ground in that condition. You can then haul and fill slowly. If you choose, two hands can work at it alone. Three or more are better. Use tread power or sweep power to run the feed-cutter. I hire a traction engine and then, with my large, heavy Ohio feed-cutter, sixteen-inch knives and a twenty-four-foot carrier, three men at the machine will put it through as fast as four teams can haul from the field. It goes through such a machine half a dozen big ears of corn at a time, makes no break or stop, and we put up in our pit from fifty to seventy-five tons per day. It takes ten hands to rush business this way, but is cheaper if you hire it done. Slow filling will do just as well, but do it to the best advantage you can. Tread well on sides of pit when filling; keep it level all the time and when done you only need to put a straw or hay covering or waste swamp grass; something that can be made useful in the barn for feed or bedding.

For several years I have saved all my chaff from grain threshing, and as we fill silos the last of all farm work each year, I cover the pits a foot or two deep with this fine chaff, and on top of this, in a few days when it settles down a little, I cut some swail grass by a little mill pond I have, and put that on top of the chaff for further weighting, and use this swamp grass for bedding. The steam from the pit will rise up through the chaff, and when I come to uncover a pit, although it will be a little mouldy, the cattle will eat it greedily, and I feed it all to them. So that, practically speaking, there is nothing wasted on the farm if you use the silo and do all other work of the farm as you ought to. Winter dairying is a bonanza with this cheap feed, but it is uphill business to make butter from dry hay-feed and from twenty to twenty-four dollars per ton for mill stuff or bran, and shelter cows by the side of rail fences or outside of the barn. They need the inside, all the time, of good, warm barns, where water does not freeze. H. TALCOTT.

COMMENTS ON CURRENT FARM LITERATURE.

BY JOSEPH (T. GREINER.)

MUSHROOM CULTURE.—A new book on this subject has just been issued by the Orange Judd Co., of New York City. I consider it a real valuable addition to our list of horticultural publications. It is written by one who can safely claim to be first-rate authority; namely, Mr. Wm. Falconer, of Long Island. The book is profusely illustrated, well printed, substantially bound, and sells for \$1.50.

The instructions are complete. In fact, the matter is presented in a way that I feel inclined to try a little of this mushroom growing myself, in the cellar under

the house, although I am not particularly fond of the vegetable. Other members of my family like their (to me disagreeable) flavor, and I believe every good husband and father should consult the tastes of the members of his family even more than his own. The task of growing mushrooms, to judge from Mr. Falconer's instructions, is not near as formidable as many people imagine, and every man may have his mushroom bed if he wishes.

There can be no doubt that the production of this vegetable for market, where carried on with system and good judgment, is exceedingly remunerative. Some of the largest growers tried to keep the business and its management secret for a long time, allowing no one to see the beds or learn any of the details of the arrangement, management and especially profits. Whoever wants to grow mushrooms, either for home use or market, will need the help that a study of this book can give him.

I am glad to see that the publishers have put on a good price. I do not believe in cheap trash. From my own personal experience I know that the public never find fault with a good, fair price for a really good and valuable horticultural book. Much of the cheap stuff offered by tradespeople isn't even worth the little that is asked for it. We are all willing to pay a fair price for originality and valuable information.

THE NURSERY BOOK.—Here we have another good book by that earnest student, prolific writer and industrious compiler, Prof. L. H. Bailey. It treats on the propagation of plants, contains nearly three hundred pages, and is nicely printed, illustrated and bound. Price not given. Published by the Rural Publishing Co., New York City.

Prof. Bailey describes and illustrates in it the different methods of propagation, by seed, separation (division), layering, cutting, grafting, etc. The larger part, by far, of the book is made up of the nursery list. This gives, in alphabetical order, the various kinds of plants and trees, with their modes of propagation, and will be found of interest and immense practical value to everyone who, in a professional or amateur way, is engaged in the multiplication of the various plants.

Of especial interest to every soil worker at this time of seed sowing and weed destruction, may be the following paragraph: "It is a common statement that seeds can never revive if allowed to become thoroughly dry after they have begun to sprout. This is an error. Wheat, oats, buckwheat, maize, pea, onion, radish and other seeds have been experimented upon in this direction, and they are found to regerminate readily, even if allowed to become thoroughly dry and brittle after sprouting is well progressed. They will even regerminate several times. Wheat, peas and other seeds have been carried through as many as seven germinations, after the radicle had grown half an inch or more, and the seeds had been sufficiently dried in each trial to render them fit for grinding."

The truth of this cannot be doubted, and yet it is not a welcome truth, as many weed seeds act in the same way. If we rake over, or otherwise stir the surface of the ground in dry weather, thinking we can kill all the weed seeds that have just begun to sprout, by exposing them to drying, we may find that some of them will grow again under the influence of moisture. For us it means more work, more persistent soil stirring.

Many plants are lost annually by what is known as "damping off." The stems of young seedlings or cuttings become brown and constricted at or near the surface of the soil, and it soon rots and falls over. The top of the plant often remains alive and fresh for several days after it has fallen. "The conditions which seem to particularly favor the development of the fungus (causing this damping off)," says Prof. Bailey, "are a moist and close atmosphere, crowding and careless watering. Plants are particularly liable to damp off if only sufficient water is applied to keep the surface moist, while the under soil remains dry. Hot sand sifted over the plants will check it, but there is no complete remedy."

I usually place a handful of naphthaline in a corner of the hot-bed. The strong vapors of this diffuse all over the beds and impregnate the whole atmosphere surrounding the plants. It seems to prevent

the formation of moulds and mildews, and since adopting this plan, I have had no trouble from plants damping off. The conditions, of course, might have been unfavorable to the development of the fungus anyhow, and I cannot yet definitely pronounce the naphthaline a sure preventive of damping off, but the indications are strongly in favor of this conclusion.

I should like to see naphthaline tried more thoroughly in lettuce houses for lettuce mildew, etc.

Another thing that will interest us at this time is the lath screen. Many of our fine garden seeds, such as celery and many herbs, come up feebly and slowly, and are subject to many risks and dangers if exposed to the full glare of the sun and to drying winds. My own experience teaches me the great usefulness of lath screens placed over such seed beds, and I have also found them useful in protecting the beds from scratching hens, when, for the sake of the protection the situation afforded, a small celery-seed bed was made in some odd corner of the yard. "The common lath screen," says Prof. Bailey, "is simply a square frame, made from common laths laid at right angles in a double series." The interstices between the laths are equal in width to the laths themselves. These screens are laid horizontally upon a light frame-work, a few inches above the seeds. The passage of the sun constantly moves the shadows over the bed, and sufficient shade is afforded, while thorough ventilation is allowed.

This and all other elevated screens are useful in shading and protecting the young plants as well, but when used for this purpose they are usually raised a greater distance above the beds. A bush screen, consisting of a low frame covered with boughs, is cheaper than the lath screens and equally as good for most purposes. In large beds the brush is often laid directly upon the ground. I prefer the lath screen in my operations. Certainly lath is not expensive, and for most purposes it would be as well to make the interstices somewhat larger and make the laths go over a larger area.

HARRIS ON FERTILIZER APPLICATIONS.

At the last meeting of the Western New York Horticultural Society, Mr. Joseph Harris, who is good authority on fertilizers, read a very valuable paper on the application of manures. I made some notes at the time (as usual), and will give to the FARM AND FIRESIDE family the gist of his essay.

Mr. Harris once asked Sir John B. Lawes, the famous English experimenter, which is better, dissolved S. C. rock at \$20 per ton, or Thomas slag at \$15. Sir Lawes replied that he preferred dissolved phosphate for dry upland, but for black, mucky grassland, Thomas slag would ultimately be better. But the manufacturers of the slag in this country have exaggerated ideas as to its value, and have advanced prices. Sir Lawes puts two hundred pounds each of phosphate and nitrate of soda per acre on barley and oats. For winter wheat he top-dresses in spring with from about two hundred and fifty to three hundred pounds of nitrate of soda per acre. This should be sowed early while there is plenty of moisture. He prefers nitrate of soda to salts of ammonia. It is good for grass, even in a dry season. Grass roots were found four feet deep following the nitrate.

Soluble phosphoric, soluble potash and ammonia salts do not move about in the soil, but remain pretty much where we put them. Nitrates move in the soil-water. Mr. Harris has used nitrate of soda on hardy roses, and finds the plants more vigorous, but he doubts whether this nitrate will have much effect on flowers in the greenhouse during the winter months.

The characteristic effect of superphosphate is to produce a rapid, early growth, which, in the absence of a sufficient quantity of nitrate, will not continue long enough to mature the grain or ripen the fruit. Farmers say "it burns up the crop." It is simply lack of other food. Nitrogen in the form of ammonia, dried blood, fish scrap, stable manure, cotton seed and other organic nitrogen, must be converted into nitrate. Such organic nitrogen applied to Isabelle grapes, made them grow as large as Black Hamburgs, but they did not ripen. It had the same effect as frequent applications of nitrate of soda all during the season; it resulted in

excessive, vigorous growth and kept the vine growing without giving it a chance to mature. All the vines want is a dressing of superphosphate in fall or early spring, plowed or worked in to get it to the roots, and a dressing of from two hundred to three hundred pounds of nitrate of soda early in spring. This need not be plowed in, as it will be immediately taken up anyway, and the nitrogen and sulphuric acid bring a healthy vine growth early in the season.

Young apple trees were less affected by scab than older ones that had borne much fruit. It is reasonable to suppose that anything calculated to increase growth, vigor, luxuriance of the trees, must render them less liable to injury. If this is so, fertilizers will help us. With trees, it may take two or three years to get the full results from an application of manure. No dressing of nitrate or superphosphate applied in the spring could change a leaf-bud into a fruit-bud on an apple tree the same year.

If you want great, thick, fat shoots of asparagus, you must get a large, luxuriant growth of the plants the preceding summer and autumn. When the plants have exhausted their strength, the shoots are flabby. A supply of immediately available plant food, sown early in the spring, will increase the size of the shoots; but our main dependence must be on the summer and autumn growth. A good yearly dressing would consist of five hundred pounds each of nitrate of soda and superphosphate to the acre of asparagus, in spring.

Ordinary fertilizers do not contain enough nitrogen for nurserymen's use. A block of apple trees producing by June 1st five tons of dry wood and leaves, contains (according to Prof. Snyder's analysis) twelve pounds of phosphoric acid, forty-four pounds of potash, eighty-nine pounds of nitrogen. A complete fertilizer furnishes twelve pounds of phosphoric acid in one hundred pounds, but it would require two or three tons to furnish eighty-nine pounds of nitrogen. On sod you accumulate nitrogen in grass roots, etc.; then, if you take off crops, you use up the fertility, and the land will be poorer than before. The judicious use of fertilizers will not enable us to grow apples at twenty-five cents a bushel, but it will enable us to raise apples worth one dollar a bushel, when the fruit from a starved and neglected orchard is only worth twenty-five cents. Altogether, Mr. Harris has furnished us much food for thought in these suggestions. JOSEPH.

BROOM-CORN.

I notice in your issue of March 15, an article on the production of broom-corn, in which the writer went on at length to explain how to cut, scrape, scaffold and bale the corn preparatory to getting it ready for the factory.

He begins with the remark that a rolling surface should be chosen, rather than a flat one, on which water might collect and stagnate during the wet seasons, thereby giving a sickly, unhealthy appearance to the brush, and rendering it scant, brittle and unsalable. As I suppose the writer is a producer of broom-corn of great experience, I am surprised that he should differ so greatly from every broom-corn producer with whom I am acquainted.

I find that while broom corn grows rather small and puny on rolling and clayey soil, on the contrary, rich, black soil, which is always to be found on level prairie land, is best adapted to a natural, vigorous and healthy growth of this plant.

I agree with him that whatever seed is selected must possess strong vitality, etc. He goes on to state that a gallon and a half will plant four acres, which will produce, on the average, a ton of corn. The last clause of that sentence is nearer right than the first, though I have observed that two acres of rich prairie land in Champaign county, Ohio, produced a ton of corn. The average production, I believe, is one third of a ton to the acre.

I fail to see how he would produce fine, salable corn by planting three to four seeds in hills three feet apart. In my experience, broom-corn planted in hills and so thinly on the land always grew to be very coarse and of a very inferior quality; while drilled from three to six inches apart, in rows about two feet six inches apart, it grew to a good size and of excellent quality.

He further states that it should be cut while still green, which is right; it should be cut green, always, and as soon as the brush is out, tables should be broken about three feet high. The stalks should be left six to eight inches long and placed on the tables in armfuls and immediately hauled to the cylinder, which should be of the best and strongest material. A barrel with spikes in it would be a weak affair, and altogether unfit. To scrape well, the seed should be damp.

Crooked corn should invariably be kept separate from the straight. While the crooked corn may be piled promiscuously in a bunk by itself, care should be taken to place the straight corn on slats, and not more than two inches thick.

The slats should be no less than eight inches apart, and ten would be better. After the brush is sufficiently dry, it is then tied in bundles, which, in the course of two or three weeks, is ready for baling, which, of course, should be done in a broom or hay press that will turn out bales of two hundred and fifty to three hundred pounds each.

Now, if this intrusion can be pardoned, I will close for this time, hoping that my friend, who has been rusticated on the hills in search of broom-corn, will come to the broad, fertile prairies of Champaign county, where they raise broom corn, and then go to Urbana, where brooms are manufactured, and he will return a wiser man, with clearer ideas of the culture and harvesting of broom-corn.

AN OLD BROOM-CORN CUTTER.

Bellefontaine, Ohio.

LINSEED MEAL AS A FACTOR IN FARM ECONOMY.

We sometimes wonder why it is that so little of this valuable product is used as food for stock in this country, while in England it is considered essential to success. Our experience with it began six years ago, and we have come to value it quite highly as a food ration for milch cows especially, while it is also valuable for other stock. In fact, the present winter it has formed a part of the food ration of horses, cows, calves, colts, poultry and pigs.

Chemists inform us that one pound of the meal contains nutriment equal to three pounds of corn, three and one eighth pounds of oats, eight pounds of wheat bran or ten pounds of hay. Prof. Stewart, of Cornell University, gives the relative value of foods as follows: Beets, 14 cents per 100 pounds; turnips, 16 cents; pasture grass, 21; meadow hay, 55; oats, 98; corn, \$1.11; linseed meal, \$1.89. In addition to the feeding value of the meal, its manurial value, if properly saved and applied, is placed by good authorities at \$18 per ton, based on the usual price of good commercial fertilizers.

The price of meal ran up to \$1.80 per 100 pounds with our local dealers, and we thought for a time of dispensing with it, but as it soon began to tell on the milk pail, we ordered directly from the manufacturers, and after paying freight, found it cost us only \$1.18 per 100 pounds, or \$23.50 per ton. At this price we cannot afford to do without it.

It has been demonstrated by the Rothamsted experiments that with a mixture

of one part of linseed meal and three parts of corn meal, a hog will gain one pound for every four and one half pounds fed, and at the same time be in no danger from cholera. JOHN L. SHAWVER.

A BEE-BRUSH.

The use of a brush of any kind should be avoided as much as possible while working with bees, for under some circumstances the brush not only irritates, but also may excite them to stinging, hissing, frenzy and fury. Do bees hiss? They do, and if you have not heard it, you have not had a hand-to-hand fight with bees.

The fibre brushes, all of them irritate. The substance is foreign to the bees, and it "tickles" and excites, more or less, under any circumstance. The bees will work into and through the brush, and in their rage, in attempting to sting the brush, they sting through it and sting each other. The writer has often seen a brush so covered with bees that little of the fibre was visible, and half or more of the bees fell off stung to death.

The cheapest and best brush is made of green grass. Bees are acquainted with grass; they come in contact with it continually, and although they may sting it under some circumstances, yet it does not irritate as other substances do; certainly it does not attract them so much or arouse them to fury.

The use of any brush in some hands will demoralize any colony. No attempt should be made to brush bees from a comb when they cover it or cluster upon it; the brush is not intended for such use. First, shake the comb two or three times, then brush off the remaining bees so lightly that it only touches them, then withdraw it quickly. A brush should be used so carefully and sparingly that the bees know very little about it. Still, its use is necessary sometimes.

Gather a handful of fresh grass, tie a cord around the centre, and then cut both ends even, two or three inches from the center, with the scissors. It is a better and cheaper brush than you can buy, even if Yucca palms sell at twenty-five cents a dozen. GEORGE APPLETON.

CHEMICAL HORN KILLERS.

Caustic potash for checking horn growth on calves seems to be fully as effectual as any of the fluids put up for that purpose, and is cheaper and more readily applied. The potash may be obtained at any drug store; it comes in sticks about the size of a lead pencil, and five cents' worth will suffice for fifteen or twenty calves. The work, to be the most effectual and satisfactory, should be done as soon as the little buttons can be definitely located on the calf's head; say, from three days to two weeks of age. Clip the hair away from the embryo horn with a pair of scissors, then with the tip of the finger moisten with water the horn that is to be operated on first. Care must be exercised not to let any drops of water run down the calf's head from the horn, for if it does, the dissolved potash will follow the same channel and cause unnecessary suffering. After moistening the little horn button, take a stick of the potash and wrap a piece of paper around it, leaving a half inch of the lower end exposed. The purpose of the paper is to prevent the fingers coming in direct contact with the potash. Hold the stick in the hand as one would a pencil, and rub it all over and around the base of the embryo horn; keep the horn moistened while the potash is being used. As soon as the skin begins to soften up and peel off the horn, and it commences to look red, as though the blood was starting through, it is enough, and the other horn may then be treated in a like manner. I have never, in my experience, found a second application necessary. Whatever potash may be left after the work is performed should be corked up air-tight in a bottle, so that the moisture in the air will not dissolve it.

LESLIE H. ADAMS.

Farm Superintendent Wisconsin Agricultural Experiment Station, in Farmers' Review.

That Tired Feeling

Prevails with its most enervating effect in spring and early summer, when the days grow warmer and the tonic effect of the cold air is gone. Hood's Sarsaparilla speedily overcomes "that tired feeling," whether caused by change of climate, season or life, by overwork or illness, and imparts that feeling of strength and self-confidence which is comforting and satisfying.

That Tired Feeling

"Every spring I take Hood's Sarsaparilla, because I know it purifies the blood and thoroughly cleanses the system of all impurities. That tired feeling will never visit the system that has been properly cared for by Hood's Sarsaparilla." W. H. LAWRENCE, Editor Agricultural Epitome, Indianapolis, Ind.

That Tired Feeling

"I was all run down, had no appetite and was losing flesh rapidly, when I was advised to take Hood's Sarsaparilla. It worked like magic; my appetite and flesh have returned and I feel like a new man." ALBERT WATERS, Stockton, Cal.

That Tired Feeling

Hood's Sarsaparilla is a highly concentrated extract of Sarsaparilla, Dandelion, Maudrake, Dock, Juniper Berries, and other well known vegetable remedies. It has won its way to the leading place among medicines by its own intrinsic, undisputed merit, and has now a larger sale than any other similar preparation.

That Tired Feeling

"Early last spring I was very much run down, had nervous headache, felt miserable and all that. I was very much benefited by Hood's Sarsaparilla and recommend it to my friends." MRS. J. M. TAYLOR, 1119 Euclid Avenue, Cleveland, O.

Hood's Sarsaparilla

Sold by all druggists. \$1; six for \$5. Prepared only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

Sold by all druggists. \$1; six for \$5. Prepared only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

WHEEL DIBBER.—A good friend among the FARM AND FIRESIDE family sends me an idea for a wheel dibber, to be used in setting out the young onion plants. The suggested implement is in wheelbarrow shape, the wheel having spokes (with outer ends four inches apart), but no fellys. I have hit upon an improvement on this originally impracticable plan, and present herewith an illustration of the implement as I now have it in my mind, and will have it in reality before many days. I imagine it will work first-rate. It can be made easily and cheaply. In the first place, I will get a piece of maple, oak or other hard wood log, say, fifteen inches in diameter and a foot long. This I am going to have turned nicely and a hole bored through for a bolt to serve as an axle. Handles are to be attached in the way shown in the illustration. It is then a roller, and may be used for that purpose in the garden, following after the seed sower, or in any place where the use of a small roller is desirable. Inch holes are bored in a circle around the roller, middle way between the two ends, four inches apart, and short wooden pegs or pins are inserted to act as dibbers. The weight of the roller presses each peg clear down into the soil, and thus holes just right for the young onion plants are made as fast as a person can walk. For lettuce, celery, cabbage or other plants, some of these pins or pegs may be left out or removed, and holes may thus be opened eight or twelve inches apart. Of course, the size of the roller should be such that the circumference is exactly three or four feet, otherwise the pegs must be inserted either nearer together or further apart, so that their number will be divisible by twelve. A marker may be attached in the way shown. I think a tool of this kind would come handy in any garden, and I do not propose to be without it much longer.

STARTING AN ASPARAGUS BED.—Several of my friends ask questions about asparagus. I hardly know what to say in reply, for there are few vegetables that can be grown more easily and cheaply than this. Select some nice, warm soil, even if weedy, for it is not a difficult task to keep the bed free from weeds. The great mistake that home growers usually make is in crowding the plants. Plants can be bought at a reasonable price of almost every seedsman or nurseryman. Get good, strong plants, either one or two years old. Plow out furrows five feet apart and six inches deep; then set the plants in them not less than two feet apart, covering lightly at first. As you cultivate, fill in gradually level with the ground. This treatment, it will be seen, gives very little chance to the weeds. The soil should be well enriched with fine compost, but there is no need of putting on the extravagant quantities of manure used by the average market gardener for general garden crops. The second year the rows may be slightly ridged, and a small part of the shoots cut and used. The third year a full crop may be expected and taken off. When the bed is once established it requires not much attention, and will gladden the grower every year with a great quantity of a most excellent vegetable. How any one can get along without plenty of asparagus, early, wholesome and palatable as it is, I am unable to understand. We have it on the table every day during its season, which lasts about six weeks. We must have it. It is not only a useful crop for the home grower, but also a profitable one for the market gardener. The home grower, also, if he has a surplus, will seldom find difficulty in selling it at a fair and paying price.

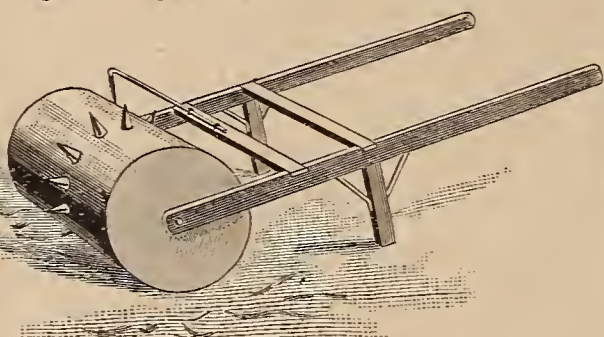
The price in market depends very much on the size and succulency of the shoots, and the size and quality depends very much on the distance the plants are set out. If crowded, the shoots will be weak and poor. With plenty of room they will grow large and fine. Prices, of course, are best at the beginning of the season, and taper down toward the end of the

season. So there is always a premium on earliness. This again shows the advantages of warm land, say, sandy loam, especially if slightly sloping toward the east or south-east. A western slope is less desirable.

As to varieties, I do not think that there is very much difference. I have four or five of them, among others the Palmetto and Barr's (Philadelphia) Mammoth, but as they were only set out last year, I cannot yet speak definitely as to their merits. Conover's Colossal, until recently almost the only variety grown in America for many years, is entirely reliable, and good enough for all. Prof. W. J. Green finds that the male plants give more and larger shoots than the fruit-bearing plants. So if we raise our own plants from seed, which is easily done, we might go over the seed bed in the fall and dig out and throw away all plants that have the well-known red berry on them.

Another good way of making a plantation is by marking off the ground in check-rows, say, four or four and one half feet apart each way, and set one good plant in each cross mark. In spring cultivation the hills may be ridged somewhat in the same fashion that used to be popular with potatoes.

DO VINES MIX?—An Iowa subscriber tells me I should quit preaching such erroneous doctrines as that vines do not mix. What I have said is this: that people need not be afraid to plant cucumbers and melons and squashes and other things in close proximity to each other. If they plant good, pure seed of these vegetables, the cucumbers will come true, and the melons and squashes will be all right. There will be no evidence of mix-



WHEEL DIBBER.

ture the first season; neither will cucumbers grown from seed gathered from plants thus grown, show any evidence of mixture with melons or pumpkins, or melons show the least influence of the proximity of the cucumbers, etc. Hybridization in such cases may be possible. Many things are possible that seldom happen. In my long experience as a gardener I have never met with an instance of hybridization between these different plants. Varieties of same kind of vegetable mix readily. People often gather seed of an "especially fine specimen" of cucumber or melon or squash, that was grown among a lot of other varieties of same vegetable, thinking, of course, "like will produce like," and when the product is a miserable mixture, they say it is due to the other vines growing near it. The trouble was already in the seed. All I can do in the matter is to let people enjoy their belief. No argument, no display of facts, will make a person see his error who firmly believes that the development of vegetables is influenced by the phase of the moon during which the seed was sown. I never pay any attention to the moon in my garden operations. When the ground is in good condition and ready for planting, I plant.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Best Winter Pear and Apple.—T. P. L., Allice, Tenn. The best winter pear for you is probably the Beurre d'Anjou, and the best selling winter apple the Ben Davis.

Blight-proof Pears.—W. W. G., Va. I do not know a single pear that I would say was blight-proof. The Keltter comes as near being free from it as any. The Duchess d'Angouleme, in some localities, is quite free from blight. The same can be said of the Lawrence, Tyson and Bartlett; but they are all subject to it in some seasons.

Pruning Currants.—J. M., Navitou, Col. Currants may be pruned any time after the wood ripens and before the buds start in the spring. The best fruit is generally borne on the wood two years old, and in pruning, a good rule to follow is to cut out all diseased or insect-infested canes and the wood that is over three years old. The weak shoots, if any start, should also be cut out. There is very little danger of overpruning currant bushes, and it is exceedingly seldom that they are pruned enough.

Painting Grape Arbor—Pruning the Vines.—Mrs. W. S. S., Dennison. It certainly would improve the looks of and make your grape arbor last longer if well painted. The paint will not affect the vines. The vines should be pruned during the winter, or at least some time before the buds start and the sap runs. Directions for pruning grapes were given with illustrations in FARM AND FIRESIDE about a year ago. The general rule, in case one wishes to cover an arbor for shade, is not to prune back very heavily, so as to leave enough wood to cover the desired surface. All the new wood should be shortened back to a place where the buds are strong and prominent (in most cases over three fourths the growth), and should not be left so that the foliage will be too thick, nor should the different canes be allowed to encroach on one another. All weak bunches of grapes should be removed when they are the size of small peas, as this will improve those that are left.

Strawberry Culture.—I. G., Basil, Ohio, writes: "I set one thousand strawberry plants last spring, three feet by eighteen inches. Not being experienced in the business and the habits of the varieties, and neglecting to keep the runners out, my rows are completely matted about sixteen inches wide. What am I to do to secure the best results for next crop? Leave them alone and plow them under as soon as crop is gathered, or would you clean the rows for second crop? I thought some of taking a narrow spade and cutting out every alternate six inches across the rows."

REPLY.—Probably your wisest course would be to plow in your strawberry plants as soon as the crop is harvested, and depend for the following crop on those set this spring. Yet, if your bed is in good condition after gathering your crop, it could be brought into good bearing condition again by cutting out at least half of the row and all the old plants and allowing new runners to form for the succeeding year. This would probably not be so satisfactory as to depend on a new bed.

Tree Currant Again.—I am in receipt of a letter from a nurseryman, complaining because in the January 1st issue of FARM AND FIRESIDE, I said the man who offers to sell tree currants eight or nine feet high is a man to "steer clear of." That there is such a thing as a tree currant I know, but that currants can be grown successfully with a stem eight or nine feet high I do not believe. I once had about one third of an acre of tree currants in Orange county, New York. It was the favorite way of growing the cherry currant when it first began to be grown largely for market purposes, and I knew many large patches of currants grown in the tree form, though every fruit grower that I know of discarded it long ago. They looked very pretty and bore good crops for a few years until the borers got into the stems, when they died out and there was no sprout left to form a new stem, and they had to be replaced. Tree currants are generally grown with a straight stem about one foot high and then branch, forming a head. Sometimes they are, for curiosity, grown with a longer stem, but at the best they are short-lived and unsatisfactory. In some parts of Europe they are trained against walls and are made to extend considerable distances, but they are only grown that way on a small scale, and the currant borer does not trouble them there as badly as here. There are many good, reliable nursery concerns in the country who use their customers so well that they trade with them year after year, but there are some dishonest concerns whose apparent aim, or perhaps the aim of whose agents, is to sell impossible novelties at high prices to the nursery. The latter kind one should "steer clear of."

Propagating Roses—Propagating the Mulberry.—E. S. P., Corning, N. Y. Roses are grown from cuttings in two quite distinct ways. One is by green-wood cuttings and the other is from hard-wood cuttings. I have for some years preferred to grow them from soft-wood cuttings in the summer, as I have found this the cheapest and most profitable time for such work. Of course, it should be understood at the outset that some varieties are rooted with great difficulty, if at all, from cuttings. Of such a nature is Baroness Rothschild, but the Jacqueminot, La Reine, Paul Myrou, Countess of Oxford, and in fact nearly all the long-jointed roses, will root freely from soft-wood cuttings if properly managed. I prefer to start with two-year-old, strong plants; pot them in March, and after the first crop of flowers, pinch off all that come. After they have commenced to make a good growth of wood, and the wood has become quite firm, I make up my wood into one-bud cuttings, leaving a leaf on each cutting. These cuttings I now put into clean sand on a greenhouse bench with a northern exposure, or else shade them with shutters to prevent wilting, and give plenty of water to keep the sand wet all the time. I also like the morning and evening sun to strike the cuttings for a short time each day. If carefully attended to these cuttings will root in hot weather in three weeks, and as there is no expense for fuel, the operation is quite inexpensive. As soon as the cuttings are well rooted, I pot them off, and when the pots are well filled with roots, plant outdoors. Cuttings rooted in July I generally get up to fifteen inches high by fall. I have found after careful trials, that while I could root about 98 per cent of the cuttings made from wood grown in the greenhouse, yet from cuttings taken from plants grown out doors I could not root over 65 per cent. I have grown roses occasionally from hard-wood cuttings, but do not find it as sure as the soft-wood cuttings. For this purpose the cuttings should be made up in the fall and be packed firmly in moist sand and carefully stored until early spring, when I plant them in very slow hot-beds, preferably between some other crop. They may also be planted in autumn, between lettuce in hot-beds, when they will generally be rooted by spring. This applies especially to such varieties as Mme. Plantier, Baltimore Belle, etc. The rooting of roses requires much skill, careful work and good judgment.—The mulberry may be rooted from hard-wood cuttings taken off in the fall, carefully wintered and planted in spring.

BERRY SHIPPERS.

Write C. W. Flick & Co., wholesale fruit dealers, Springfield, Ohio, for stencils.

Catalpa.—A. L., Rushsylvania, Ohio. The Catalpa speciosa is the tree that is most highly esteemed for fencing posts. It is a rapid, free grower and very valuable where perfectly hardy. It is also a very beautiful ornamental tree in both foliage and flowers.

Rose Beetle on Grape Vines.—N. R., Grafton, W. Va. The bug you refer to is probably what is known generally as the rose beetle. If you have only a few vines, they may be protected by covering them with mosquito netting, or by covering the bunches with small paper bags, or what is better, with light gauze-cloth bags. These latter may remain on all summer, but should be put on early. The beetles may be gathered by hand where they congregate on the bunches early in the morning, or they may be jarred off onto sheets and destroyed.

Strawberry Failing to Fruit.—J. W. A., J. Mullins, Tenn., writes: "Why does my Warfield strawberry fail to fruit? They bloom profusely, and I find the same trouble with the Cloud's Seedling. Those two varieties are in adjoining rows, remote from other varieties. How may I learn what pistillate blossoms are?"

REPLY.—Both the Warfield and Cloud's Seedling are pistillate kinds, and should have a perfect flowering variety planted near by. You can soon learn the difference between pistillate and perfect flowers by comparing the blossoms of pistillate kinds, like Warfield and Cloud's Seedling, with those of perfect flowering kinds, like Charles Downing, Wilson or Sucker State. You will find the flower of the pistillate variety looks like a little burr surrounded by the white leaves, while in the perfect flowering variety there is a row of little stems with minute yellow pods on their ends between the burr and the white leaves. These little stems are stamens, or the male organs, which the pistillate kinds do not have. By thus carefully comparing the flowers of known kinds you can soon learn the difference.

Plum Curculio.—I. Q. A., Clowes. Many growers see their trees blossom every spring, and in the following autumn the ground is covered with their crop of green and rotted fruit, every one being a receptacle for a future crop of curculio. The means that I have made practical, as well as successful, is by placing under each tree a muslin cloth sufficiently large, and fasten it to the trunk of the tree at the center; then drive stakes at each corner of the sheet, keeping it at least two feet from the ground, so that it does not rot or soil. By this means I have used one sheet for the past three years, and have had plums that many years. I jar the trees every morning with a mallet or small axe, and by gathering curculios in the spring and early summer, I can also gather bushels of plums in the fall. People passing by couldn't comprehend why I had sheets under my plum trees until the time came for gathering the harvest, when they could see my trees loaded down with luscious fruit and their trees were empty, while on the ground under their trees was a harbiuger in the shape of green and rotten plums, breeding insects for next year's crop, to be caught and destroyed by those who either use this means or the fungicides.

Snowy Tree Cricket—Grape Rot.—H. T. B., Walkill, N. Y. The cuttings received contain the eggs of the snowy tree cricket, which is a light green colored insect about seven tenths of an inch long and semi-transparent. They are the crickets that get into houses in the latter part of summer and keep up such a merry, shrill chirping as to make themselves a nuisance to those at all nervous. They also chirp during afternoons among the bushes. They do not even feed on the grape, and are perfectly harmless, except that they have the unfortunate habit of laying their eggs in the branches of raspberries, grapes, plum, peach and other trees, owing to the presence of which the cane is weakened and breaks off as soon as heavy with foliage or fruit. They are more often a nuisance among raspberries and blackberries than anywhere else. The eggs are laid in the autumn, close together in rows, sometimes several inches long; they hatch out about midsummer, or a little earlier. When first hatched the young have no wings, but they at once leave the twig or cane on which they hatch, and do no further damage. They at first feed on plant lice, and later on eat ripe fruits and other succulent food. You should cut out, late in the fall or early spring, all those portions that contain the eggs and burn them.—Grape rot is caused by the growth of a very small plant which grows in the tissue of the grape berry instead of in the soil, as do our commonly-observed plants. Most diseases, of both plants and animals, are thus caused.

Late Grape—Gladstone Raspberry—Propagating Raspberries—Kelsey Plum.—J. M., Baltic, Ohio, writes: "We have a grape vine that bears annually, and the fruit does not ripen till about November. It is of oval shape, thin skin, and very sweet when dead ripe. Will you please tell me if you know of any other grape ripening so late? Is the Gladstone red raspberry what it is claimed to be?—How can I propagate the raspberry?—Is the Kelsey plum hardy enough to stand the winter in this section?"

REPLY.—The vine you speak of must bear very fine fruit in order to make it of much value, because, ripening so late, it would be very generally injured by frost before it was mature. Yes, there are many grapes that would not ripen until November, or not ripen at all with you.—The Gladstone red raspberry is a novelty, and as yet tried only on a small scale. I do not think it promising as a market berry, but of interest because it produces most of its fruit on the new wood and over a long period.—Raspberries are divided into two groups. The ordinary cap raspberry is propagated by covering the tips of the canes in July and August, when they reach the ground; they will be rooted by fall. The red raspberries send up a profusion of suckers each year, which may be planted in the fall or spring.—In a very favored location the Kelsey might be hardy with you; but it is not considered hardy in any part of Ohio, nor recommended for planting north of southern Missouri.

INSECTS ON FRUIT TREES

Can be destroyed by spraying with London Purple. Diseases of grape vines can be checked by spraying with Bordeaux mixture. The Field Force Pump Co., of Lockport, N. Y., manufacture the Knapsack Sprayer and a full line of Orchard and Vineyard Outfits. Write them for circulars and directions.

JAPANESE INSECT DESTROYER

destructive insects. Contains no poison. Price by mail 25c. Stamps accepted. Friend Medicine Co., Greenvale, N.Y.

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EXTRACTS
FROM CORRESPONDENCE.

FROM TENNESSEE.—Hardeman county lies in the western part of the state. We have four railroads in the county. We have plenty of fine timber and good running water. We raise corn, cotton, peas, potatoes and all vegetables we need. Stock runs on the range all winter. Land sells from one to twenty dollars per acre. M. A. B.
Middletown, Tenn.

FROM NORTH CAROLINA.—Madison county, organized about ninety years ago, contains 233,575 acres, 69,089 of which are improved. The population is 18,905. The products are tobacco, corn, wheat, oats and grass. Tobacco is the chief crop and it grows the finest in the state. The timber is oak, walnut, cherry, poplar and pine. The minerals are iron, lime and corundum. Farming land is worth from ten to twenty dollars per acre, according to location and improvements. We want northern capital and people to improve our valuable country. We have a fine climate, good water and many other things to be thankful for. Ray, Madison county, N. C. J. L. J.

FROM MISSOURI.—If you want to live in the healthiest country in the world, come to Virginia settlement, the garden spot of Wayne county. We have the most sociable people and the clearest streams of pure water to be found anywhere. We have good schools and churches. Land is cheap and markets are good. Fruits of all kinds do well. We never had a drouth that prevented us from raising enough to live on and winter our stock. Hogs fattened on the acorns and hickory nuts in the woods last fall. The winters are very mild here. We have had no ice to put up for three winters. We have a fine prospect for fruit this year. We welcome good people who come to help build up the country. We have some people from the North, and they say this country is bound to be a great country some day. B. McC.
Patterson, Mo.

FROM ARKANSAS.—Benton county produces more fruit than any other county in the country. Benton takes the premium on fruits wherever shown. It is a good place for a man who wants to go into the fruit business with small capital. Land is worth from five dollars an acre up. A man, out from ten to twenty acres of land, in the fruit business, can make money if he sticks at it. Part of this county lays well; the eastern part is mountainous. We have a fine climate, with very little cold weather. In summer the nights are cool; one can sleep comfortably under a blanket. I came from the North five years ago and never was treated better than by the people here. There has been a large immigration here from the North and East. We have some fine timber in the eastern part of the county—oak, hickory and walnut. We never raise large crops here, but always raise enough to do us without calling on any other state for help. Rogers, Ark. E. F.

FROM TENNESSEE.—There is much written about the South as a home for northern people. There are many choice sections, but perhaps none so well adapted to northern people as the Cumberland plateau. Cumberland county, Tennessee, is 2,000 feet above sea level. You have to climb a mountain to get to it, but across the plateau here at Pomona is a fifty-mile stretch of country, fully one half of which is well adapted to homes. In 1890 the census showed this county to have 5,323 white people and only fifty-three colored. Perhaps one half of the people are of northern birth or parentage. Land is worth from \$4 to \$25 per acre. The mercury rarely goes above 97°, and for several years has not been within 10° of zero. It is a good place for apple raising and for stock. We need a great many more progressive people to develop farms and orchards here, for we have territory enough in this county to support twenty-five or fifty thousand people. H. E. P.
Pomona, Tenn.

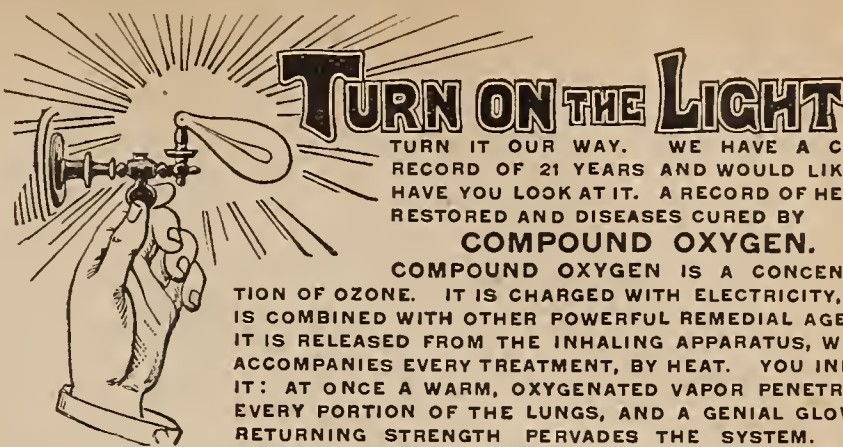
FROM WYOMING.—Johnson county is in the north-central part of Wyoming and contains about six thousand square miles. In its rich valleys anything can be raised that will grow in this latitude. All small grains grow to perfection; also vegetables of the finest quality. Our prize potato crop was raised by Wm. H. Sturgis, who was awarded first grand prize, offered by the American Agriculturist, of \$25. He also received \$250 from the state, and sold his potatoes at from 1½ to 2½ cents per pound, or from 90 cents to \$1.50 per bushel. He raised 974 bushels, thereby making over \$1,500 from one acre of ground without a single load of manure. Wheat will average from 5 to 40 bushels per acre; oats, 40 to 50 bushels, and other grains in proportion. Irrigation has a great deal to do with this extraordinary production. Buffalo, the county seat, is an enterprising little town of 1,500 inhabitants. It has the distinction of being farther from a railroad than any other town in the United States; but we are to have one next fall. We have a courthouse which cost \$40,000, a public school-house which cost \$20,000, three churches, six church societies, four very prosperous secret organizations, two flour-mills of fifty-barrel capacity

each, electric lights and water works. Fort McKinney, two miles away, is one of the most beautifully located posts in the West, and according to the surgeon-general's report, the most healthful in the United States. It is garrisoned by about five hundred soldiers and citizen employees. Prices are very good here this spring. Oats, 2½ cents per pound; wheat, 2 cents; potatoes, 3 cents. We sell everything by the pound instead of by the bushel, peck, etc. There is a great deal of government land yet to be taken up. Improved farms can be bought at from \$5 to \$50 per acre, according to location, etc. Fruit is successfully raised here—apples, crab apples, raspberries, gooseberries, currants, strawberries, etc. The summer nights are too cool for peaches. All small fruits do well, and are very productive and sell at good figures. I have five acres of fruit in bearing. We are continually in sight of the snow-capped peaks of the Big Horn mountains. One never tires looking at them, especially in summer. When everything in the valleys is green the beautiful, snowy peaks are more beautiful by contrast. E. B. C.
Buffalo, Wyoming.

FROM MISSOURI.—Winfield is my native town, and is situated on the Keokuk & Northwestern railroad, and three miles west of the Mississippi river and fifteen miles east of Troy. Winfield, the county seat of Lincoln county, is a beautiful little town of nearly four hundred inhabitants. Being situated partly on the bluff and partly in the valley, makes it a most picturesque little city. Within a mile of Winfield is situated the well-known Sulphur Lick springs, which are noted for their healing qualities. People come from far and near with their jugs and kegs and take them home filled with the medicinal water. We had an exceedingly mild winter in this state, ice never formed over two or three inches thick. Farmers plowed right along up to the first of February. Owing to the dry weather all fall, the late-sown wheat does not look as well as it should. Feed is scarce with a great many farmers. Corn is from fifty-five to sixty cents per bushel; oats, fifty cents, and other feed in proportion. Live-stock is low. The Farmers and Laborer's Union in Missouri now numbers about two hundred thousand in membership and is increasing very rapidly. Winfield, Mo. W. S. N.

FROM FLORIDA.—I wish to say something concerning the streams, and more especially the water power of Columbia county. To many, any remark about water power in Florida streams will, no doubt, sound ridiculous. Nevertheless, such power there is here, and not in insignificant quantity. All the east side of the county is bounded by the Oustee creek, on which numerous mill-sites, with considerable power, could be located. But of greater importance is the stream bounding the county on the south, the Santa Fe river. This stream affords at all seasons a sufficient volume of water to furnish power for vast milling or manufacturing enterprises. Something in this line was undertaken at a point called Leno, a great many years ago. Before the construction of the S. F. & W. railroad, this was a place of considerable importance. Girding and sawing are still carried on to some extent, while the ginning and merchandising have been attracted to the railroad a few miles away. But at Leno are buildings, both mills and dwellings, to house a very considerable cotton manufacturing enterprise. Some little modification and improvement of dams would afford power for the movement of at least from twenty to twenty-five thousand spindles, and much of the machinery needed is already on the ground. The ginning-mills are yet in place, and surrounding plantations would furnish the staple without cost of transportation. J. B. S.
Mount Tabor, Fla.

FROM NEW YORK.—Wyoming county was formed from Genesee county in 1846. The surface is a broad, rolling upland, divided into ridges and broken ravines worn by streams. The highest ridges rise 1,200 to 1,500 feet above Lake Erie, and 1,700 to 2,000 feet above the tide. Some of the ravines are very deep—nearly 1,000. Genesee river is on its eastern boundary and is bordered with bluffs from 200 to 400 feet high. The river descends near Portage in a series of three falls, to a depth of 300 feet or more, in a distance of two and one half miles. The Horseshoe Falls are a few feet below the famous Portage bridge. The height of these, including the rapids, is about 70 feet. Half a mile further down are the Middle Falls. The water is broken into rapids and then plunges down a distance of one hundred and ten feet in an unbroken sheet, with perpendicular ledges. A cave called the Devil's Oven is worn under the west bank, large enough for one hundred persons to sit in when the water is low. The Lower Falls, nearly a mile below, have a fall of 150 feet. Sugar Loaf, at the foot of these falls, 15 feet in diameter and 100 feet high, receives nearly the whole force of the rushing water through a gorge 15 feet wide, and then falls 20 feet at the feet of Miss Sugar Loaf. This forms one of the most picturesque scenes in western New York. The principal body of water is Silver Lake in Castile. It is 3 miles long and half a mile wide. In 1855 a great sea serpent was said to be seen in its waters. Thousands came to see it, but none ever saw. Thousands camp there now. M. B.
Castile, N. Y.



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FROM MONTANA.—Bitter Root valley is one of the most fertile valleys in Montana. We raise all kinds of vegetables, and all grow to an enormous size. We raise from thirty-five to seventy-five bushels of wheat per acre, and from forty to one hundred bushels of oats. We have a good market for all we raise. Wheat is selling for seventy-five cents per bushel and oats are worth seventy cents; potatoes, one and one half cents per pound. This is a great lumbering and mining country, which gives us a home market for all we can raise. This valley is situated between the Rocky and Bitter Root mountains. It is from five to twelve miles wide and eight miles long, and is watered by the beautiful Bitter Root river. This river is full of mountain trout which weigh from one to five pounds. Wages are from thirty-five to fifty dollars per month. Land is worth from ten to twenty-five dollars per acre. We have a branch road of the Northern Pacific running up the valley from Missoula to Grantsdale, a distance of sixty miles. All of the government land is taken up. I came to this valley five years ago and had twenty dollars when I got here, and a family of seven. I now have one hundred and sixty acres of good land all under fence, and an irrigating ditch sufficient to carry all the water necessary to irrigate my ranch. I have a good wagon and team, seven head of cattle, ten head of hogs and farming tools sufficient to cultivate my farm. I am about out of debt and have plenty of bread and meat on hand. S. M. B.
Darby, Montana.

FROM KANSAS.—The farmers of Ellsworth county are turning their attention largely to wheat raising. Corn is sometimes a failure, although it often makes an immense crop. Wheat, if properly put in, is almost a sure crop. In 1889 wheat averaged in this county a fraction over thirty bushels per acre. Last year the crop was a little below the average, but some of our farmers are holding from five thousand to twelve thousand bushels of wheat yet. By far the largest crop was sown last fall that ever was sown in this county. We have had a wet March and the wheat is in excellent condition. The prospect is that the binders and headers will have to run night and day to take care of the crop. There are many fields of from three hundred to one thousand acres sown, and a great deal of sod will be broken this summer for wheat. Some of the large sheep ranches are breaking up their pastures for wheat. Stock can be kept in good condition on the straw in winter, and in summer cattle fatten faster on our native grasses than on clover. Land is cheap yet, but will advance rapidly from now on, and I know of no better investment than a good wheat farm in Kansas. We have large mills which make the finest grade of flour. Ellsworth county has attracted some attention of late by its immense salt works at Kanopolis. A company with a large capital is operating it. The salt is mined at a depth of six hundred and forty feet and is as clear as any salt on earth. It will require three hundred men to operate the works when under full headway. W. B. E.
Kanopolis, Kansas.

FROM IDAHO.—Clearwater is a part of Camas ravine, which is a portion of the Palouse country. It is the most productive grain country that I know of, and I am acquainted with the Pacific slope from South America to British Columbia. I cannot agree with S. L. of Potlach (a portion of the same country), as to corn, as the nights are too cool for a good corn country. In fact, there are but few places on this slope that the nights are suitable for corn. There are some small valleys in southern California, Arizona,

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and Sonoma and Sinia Loa in Mexico, where corn does well. Vegetables of all kinds grow well; also the small fruits and apples, pears and plums. They tell about raising good peaches on the rivers here, but to any one acquainted with the peaches of Georgia, California and Arizona, these do not carry a very high standard. We are right at the door of as fine a mineral country as there is on this slope. The Elk City and Warren districts, which have scarcely commenced to be developed, are rich in veins of gold, silver, lead, copper and iron, which, in future time, will furnish a market to all products right at our doors. Idaho is now the third producer of the precious metals, it belug a question of only a short time before she will be the first. This northern part is by far the best agricultural part, and is abundantly supplied with water power for all manufacturing purposes. Here in this section there is a fine opening for a flouring-mill. Camas Prairie has two small ones, but they do not nearly supply the demands of the county. One on the Clearwater would possess every advantage. J. E. B.
Clearwater, Idaho county, Idaho.

FROM TEXAS.—Those parts of Texas known as the Pau-handle and Llano-Estakado, which have, until recently, been regarded as wild, sterile, arid plains, uninhabitable except by the cow-boy, are now being filled with farmers. All north and west Texas seems to have taken on almost a regular Oklahoma boom. But as our territory is so large it will take some time yet for all our lands to be occupied by actual settlers. We have plenty of state school land of superior quality, that can be had at from two to three dollars per acre on forty year's time, at five per cent interest per annum. Besides the school lands there are millions of acres of individual land that can be bought cheap and on easy terms. The lands have been well tested within the last four years and have settled the fact that this is a great grain country. Wheat often yields thirty-five bushels per acre, while oats have yielded far beyond one hundred bushels per acre, and other grains in proportion. These yields are obtained on native soils with no other cultivation than our too common method of shallow plowing. The same imperfect method produces abundant crops of potatoes, melons, vegetables, corn, cotton, etc. The success of the few pioneers of a few years ago is now inviting many intelligent farmers to this part, who are introducing improved farm implements and intelligent methods of cultivating land. We can't understand why so many are rushing to Oklahoma or the Cherokee strip, where society seems to be in a chaotic state, and where the climate is more severe, while there are millions of acres of the most fertile lands in the genial clime of Texas that are to be had almost as cheap as a gift. Haskell, Texas. W. H. C.

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Our Fireside.

LONG AGO.

BY J. C. H.

He gave me his promise of changeless truth,
(Down in the wood where the ivy clings;)
And the air breathed rapture, and love, and youth,
(And yon tree was in bud where the throstle sings.)

He said he was going across the sea;
(Far from the wood where the ivy clings,)
And would bring back riches and jewels for me;
(But brown leaves shake where the throstle sings.)

Hope made life like a summer morn;
(Sweet was the wood where the ivy clings;)
Now my heart is cold and withered and worn,
(And the bough is bare where the throstle sings.)

Days are dreary, and life is long
(Yet down in the wood the ivy clings,)
And the winds they moan a desolate song,
(And there's snow on the bough where no throstle sings.)

Spring will come with its buds and leaves
(Back to the wood where the ivy clings;)
But 'tis winter cold for the heart that grieves,
(And I hear not the song that the throstle sings.)

SISTERS, BUT NO KIN.

BY MARY TWOMBLY.

CHAPTER VI.

AN evening or two after this, Almada made her first *debut* in "polite society." It was at an evening reception given by Mrs. Allston Putney, an intimate friend of Mrs. Reigold. This lady understood the latter's whim in asking Almada to town, and now that she was in town she understood equally well that somebody ought to help Mrs. Reigold in knowing

what to do with her. The coming reception at her own house would, she felt, quite cover her own social duty in the matter, besides being the very easiest occasion at which a girl unused to society could assist.

Almada's appearance created quite a little sensation, especially among those who knew nothing of her advent. Esther had robed her in an evening gown of her own which she had never worn. It was made after the manner of the first empire—that quasi classic revival so much in vogue of late—and nothing could better become the fair, girlish, almost child-like prettiness of the wearer. Her fair hair was dressed in classic waves low upon her forehead and caught in a psyche knot at the back, and a simple, rose-colored sash was wound around her slender waist. No young girl could look more lovely, dainty and simple.

Esther wore a gauzy combination of lavender and rose, fashioned rather after the manner of the Medici and Marie Stuart period, and her stately, young beauty made a fitting and beautiful contrast to that of Almada.

After Almada had been presented to her hostess and seated herself on a fauteuil at a window near by, nobody would suspect that this was her first appearance at a scene like this. Her chubbily fair face, with its regular features of a slightly retroussé caste, crowned with fluffy, light hair, made as pretty a picture as one could wish, and suggested no lack of refinement. Almada's speech alone betrayed that she was half conscious of this herself, though her utter ignorance of the world prevented her knowing aught of how she would be ranked in it. Her consciousness of what she lacked was just enough to disconcert her and, had she been less pretty, make her appear awkward, but her prettiness, coupled with her extreme youth, was an excuse for her not knowing what to do with her hands at times, and also for her inability to preserve repose when spoken to or looked at attentively.

"My dear," spoke Mrs. Allston Putney as she found herself disengaged for a moment's chat with Mrs. Reigold, "do you feel entirely satisfied about having brought this girl to town? I've been thinking it may turn out something more than a joke for the girl. She is not at all what I expected to see; she is surprisingly pretty, invitingly attractive."

"And equally repelling, I assure you, after you are tete-a-tete with her a few times," laughed Mrs. Reigold. "The dainty-looking creature is an elephant on one's hauds; one

knows neither what to do with her nor say to her."

"What do you purpose doing?"

"Send her home again, of course, as pleasantly as possible when the time is up."

"But suppose you find her unwilling to return? She may imbibe a taste to stay."

"I think I can manage that."

"I trust you may have no reason to regret carrying out your fancy."

"My dear, I never regret amusing myself when it hurts no one else. It's an exercise of power that pleases me. I glory in being able to do things that set timid people wondering, and that they dare not do."

Meanwhile a young girl had gone over to where Almada had momentarily retired. "Miss Poore, is it not?" she asked, smiling; and then in answer to Almada's affirmative nod: "Miss Wynn and myself are great friends. I have been waiting for her to present me, but she is so surrounded with people I can't even catch her eye. In the house of a mutual friend, however, one may always waive the formality of a regular introduction. I am Miss Weld, Annie Weld."

"I am pleased to meet you," replied Almada primly and eyeing the other inquiringly.

"I hope you are enjoying your visit to town. This is the first time I understand. You must find much to interest you."

"Yes, I do, on the whole, but I don't find anything, as yet, to astonish me."

Almada said this with polite decision. She had heard or read somewhere that it was a mark of low breeding to seem surprised at things new or strange, but she noticed that Miss Weld looked a trifle surprised at her answer. "Did you expect so very much of us?" she asked, smiling.

"Oh, I expected most anything, but I don't see but you are all a great deal like other folks," Almada answered, smiling in turn.

"Do you know many of the people here today?" queried Miss Weld.

"How could you wish us to settle a point like that, Miss Poore; think of the consequences. My friend Cazenove here, is the only man present who might venture such an opinion with any degree of safety. He could plead the time-approved law of aesthetics in its support."

"And in that case have few followers," said Cazenove. "People in general care no more for classic beauty than they do for classic books, despite a great deal talked and written to the contrary."

"Isn't that rather hard to prove, Mr. Cazenove?" asked Esther.

"It does not seem so to me; you can discover the one by inquiring about circulation at any library, and the other by noting who are the popular beauties."

"The latter, I should think, would be very difficult to discover," persisted Esther.

"Not at all; you can begin with the most accessible beauties, actresses," continued Cazenove. "For example, artists on both sides of the Atlantic have voted Langtry the most classic type on the stage in recent years, while two thirds of the people who go to see her can scarcely be brought to admit she has any beauty at all; yet those very people rave over some little woman with a *petite* figure, saucy face and plenty of *chic*."

"That reminds me, were you ever in the Island of Jersey, Cazenove?" asked Elwell.

"Yes, I sketched there a whole season a few years ago."

"Then you must know that the islanders scold the idea of that much-advertised woman

quite at an end. A trig-looking young woman handed me a small, kerosene-oil lamp to take to my room. As I had some of my traps to arrange, I asked her if I could not have a better light. 'What!' she exclaimed, 'a better light! Why, our very toniest customers all summer go to bed by such a light as that.' I assured the young lady that with me it was not a matter of tone, high or low, but of light; and, as meekly as I could, explained why I desired more. Then, without another word, she deigned to give me a larger lamp. I admired the damsel's discernment. I certainly did not look like a 'tony boarder.'"

All except Almada laughed at the story and Esther added good-humoredly:

"Really, Mr. Weld, city people have no moral right to complain if the spirit of caste, which they themselves introduced at such places, greets them again in such *malapropos* manner."

"I shall not attempt to deny that impeachment, Miss Wynn, but I assure you I was one of the most casteless of mortals that night."

"Well, I'm sure I know that summer boarders are awfully saucy and impudent. I've seen 'em so to girls that waited on 'em at the hotel down at the Centre, that were just as good as they was," broke out Almada, with heightened color and reckless of grammar.

The airy manner of the young men vanished and a somewhat lengthy pause ensued, during which Miss Weld told Almada it was time she should seat herself at table, and taking the girl's arm, with a word of light pleasantry she led her off.

"So that is Mrs. Reigold's little *protege* from the country. Refreshingly naive," observed Mr. Weld.

"A very child," was Esther's brief reply, and then she changed the subject by asking Cazenove if his studio was open to visitors yet.

"Open and waiting," he answered, "not to all the idle and curious who may desire to look in, but to my friends."

"I shall go there and bring Almada with me. It will be a treat to her."

"And to me, too," he answered.

"Do not mock the poor little girl," she said, appealingly. They stood a little apart from the others.

"Mock her? Indeed, I do not. She interests me; I have never seen any one like her."

"I wish Aunt Florence had not asked her here. It is worse than I had expected."

"My dear Miss Wynn, do not take a matter so light with such tragic seriousness. At worst, it only furnishes a bit of amusement to others; the little girl herself does not mind, for she does not realize."

"No, but she has misgivings."

"Indeed! I should not have suspected that. I looked upon her a moment ago as a singular combination of tactless ambition. Don't you think tact and ambition nearly always go together?"

"I have never thought about it; perhaps because I am not ambitious."

"I have never supposed you were, in the sense I mean; but it delights me to hear you say so." Then, as Esther looked

up suddenly, "I beg your pardon," he said, "I have no right to speak as I have."

A bright color suffused Esther's face; she breathed rapidly, tried to speak and hesitated.

"Mr. Cazenove," she said at last, "an evening party was given at my grandmother's lately, at which all my friends were supposed to be present. I made out the list mostly myself; your name was on it. You never came, and you never sent a regret, so far as I could learn."

"For the simple reason, Miss Wynn, that I never received an invitation."

The two stood and looked at each other. Cazenove wore a rather sad smile; Esther said nothing.

"I am glad you spoke about it," he continued, "although I knew, I felt certain how it was. It is a matter we need never speak of in future. Some things one cannot speak of,



"Can't say I know anybody but Esther. I've seen, perhaps, half a dozen of 'em before."

"Miss Putney has asked me to assist her niece in pouring out the tea, won't you come and sit beside me at table and then I can tell you who everybody is as they drop into the next room for refreshments. Then, too, you can be seen to advantage. You look too lovely to be crowded into some corner."

Almada could not help being pleased by a compliment like this; she began to think Miss Weld the nicest girl she had ever met and would, no doubt, have opened her mind to her freely had not Esther come up, followed by two or three gentlemen who wished to be presented. One was Miss Weld's brother, another was the artist, Cazenove, and the third was a Mr. Elwell.

"I am very glad to meet you, Miss Poore," said the latter, "and glad, also, to escape a discussion in which I might be asked for an opinion; two or three ladies yonder were trying to settle who was the handsomest woman present."

"Did they settle it?" asked Almada, interestedly.

"Not to their mutual satisfaction; as usual, they differed."

"I should think it would be the gentlemen that settled that," said Almada.

being their representative beauty, and claim that they have dozens of women much handsomer; and in point of fact, her type is rather numerous. Langtry on a less flushed scale may be seen tending bar in every public house.

"Ah, that throws light. We now see where Elwell went to make studies among the islanders," struck in Miss Weld's brother. "Shocking young man to tell his slurs so openly, is he not, Miss Poore?"

Almada answered only by a laugh that was almost a giggle.

"Don't let him pervert your judgment, Miss Poore. Even ladies know very well that bars over there do not mean quite the same thing as here." They are under no social ban, in the first place; and the daughters of the most respectable of the common people tend them—very much, in fact, as the farmers' daughters tend table at the summer hotels here."

"Ah, that reminds me," said Weld, "of the nice sense of social distinction sometimes displayed by the latter. A season or two ago I was gunning down in Maine, and on my return home stopped about nightfall at Bar Harbor. The season was quite over, and all the regular hotels closed; but I stopped at a semi-public cottage, where they took summer boarders. I must have been the last arrival of the season, for the usual accommodations for guests were

FOR CATARRH

boils,
pimples, eczema, and
loss of appetite,
take that sure
specific,

Ayer's Sarsaparilla
Cures others, will cure you

but it is always better to understand. By the way, Miss Wynu, I expect an ancient relative of mine home from Rio Janeiro soon; he may arrive any day now. He is my grand uncle, a younger brother of my father's father. He has been away for thirty years, with the exception of one or two flying trips to New York. I want very much that you should see him when he comes."

"And I shall be equally glad to see him. Do you realize, Mr. Cazenove, that I have never seen anybody at all related to you?"

"Indeed you have, though you don't know it. I have cousins in the second, third and fourth degrees by the dozen hereabouts. The American branch of my family originated here when Boston was small enough to have all its leading citizens related."

"I am sorry to interrupt you," spoke Elwell, crossing the room, "but Miss Weld tells me the tid-bits are disappearing so fast that nothing appetizing will be left if you do not come soon."

The three entered the dining-room together. They found Almeda seated beside Miss Weld and surrounded by quite a group of both sexes, who chatted away in the usual free-hand style that prevails upon such occasions, while they listened with much seeming interest to the monosyllabic remarks with which Almeda favored them. Almeda was looking her very best. Evidently, she felt she was being admired, and in turn beamed gratitude upon all around her. On returning, she told Esther this was the first time she had really enjoyed herself since coming to town.

"I felt sort of at home," she admitted, "and I'm gettin' all over being afraid to talk; all those fashionable folks talk about such silly things themselves."

CHAPTER VII.

BEFORE leaving Mrs. Putney's that evening, Mr. Cazenove and Mrs. Robert Reingold had a little talk together, in which it was settled that a group of mutual friends should meet informally at his studiosome afternoon that week.

"I shall leave it with you to make our friend, Mr. Alton, understand that he is cordially welcome," said the artist, on parting; and much to his surprise Mr. Alton came, accompanying Mrs. Reingold, Esther and Almeda, though it was quite patent that he kept as much aloof from the latter as was consistent with the degree of civility his own dignity demanded.

Cazenove's studio was situated on a pocket-like little avenue that ran from a leading thoroughfare at the West End. The immediate access to it was not inviting, but the studio itself commanded a charming view of the Charles river. Its interior was spacious and extremely picturesque in finish and arrangement. Like studios in general, comparatively little expense went to produce its effects. A background of burlap covered the walls, which were thickly studded with pictures; some souvenirs from foreign artists, and others picked up at divers places and times, and nearly all unframed. There were comparatively few chairs, but in lieu of these, numerous studio-made divans were covered with oriental rugs and bits of curious foreign stuffs that lent a sumptuous and luxuriant air to the place—an impression that was emphasized by the presence of two or three growing palms. Casts and figures from the antique peeped from several curious nooks and crannies. A spinnet, more than one hundred and fifty years old, an heirloom from the artist's family, stood in one corner, and a mahogany frame sofa of the same date, fashioned after a Grecian model, filled another. A couple of mahogany tables, glowing in the mottled richness of hue that time alone can lend, completed the ensemble.

"This is charming; this is retirement, repose and a thousand delightful things all commingled. Mr. Cazenove, whenever I am weary of the outer world, will you let me come over here to rest?" said Mrs. Reingold, after she had looked about.

"I shall be charmed to have you pay the place such a compliment," said the artist.

"One never feels an effect like this after the best the upholsters can do for one," said Esther.

"Oh, this sort of thing strikes one as novel; one's own things are never novel," explained Mr. Alton, sententiously.

"It is the irregularity, the helter-skelter mixture of odds and ends, the suggestion of Bohemianism, a touch of which is latent in almost everyone, that appeals to you," said Cazenove.

"Dr. Ashmead spoke, the other night about civilized conquerers employing the customs of barbarism; there's a good deal in that."

"And there's a great deal in some folks having more than they know what to do with, I guess," broke in Almeda. "That's what makes Mrs. Reingold think she could find more rest here than in her own splendid home."

There was a general laugh at this. Even Mr. Alton deigned to smile, and Almeda felt encouraged to go on. "It reminds me," she said, "of a family that lived up our way, near Ridgeville, in an awfully old house, built by one of the first settlers, pa said. It was so old that they couldn't do anything to fix it, even if they had the money. There was old rafters and standin' posts to hold up the slopin' roof,

and the girls felt awful bad about that when strangers come to see them. Their father would 'a sold the place if he could get any one to buy it, but la, sakes! nobody 'round there would think of such a thing. By-m-by, some folks from the city come up there in the summer, and one family took the greatest fancy you ever see to that particular house, and bought it at a fust-rate price; and above all things they prized in it was them very rafters that troubled and shamed the Ridgeville girls when they had comp'ny. The city folks had them rafters and posts paluted and polished, and had verandas to match built outside the rooms that had 'em, and the way they showed off that place to city visitors was a caution. The Ridgeville folks thought at first that family was a mite crazy."

Cazenove laughed heartily. "Miss Poore, you make me want to go up to Ridgeville and sketch," he said.

"Oh, do," she cried. "You'll have a splendid time. Come up this summer."

"I'll try," he answered.

"Miss Poore is very apt; I have great hopes of her developing into a brilliant woman, yet," laughed Mrs. Reingold. "As regards myself, I feel the force of her comparison. The first time I saw Whistler's interior decorative effects in cream and gold colors, I went home and had a room fitted up in that way at once. Whenever I felt weary or satiated with people or things outside, I shut myself up in that room to soothe myself in the soft sunniness of its tones. I found it clyssium for a time, but the potency of its effect gradually faded."

Meanwhile, Almeda was making an independent tour of inspection around the room.

"Mr. Cazenove," she called, pointing to a cast of the Venus of Milo, "isn't that the figure of the woman that folks called the handsomest in the world? I remember it since I was told about it, 'cos it has no arms."

"Yes, many excellent judges have pronounced it the handsomest type that has come down to us."

"Just so; and then a lot of other folks that would never like it at all themselves, keep on saying the same thing. Now, I know if a woman with such a straight, hard nose down her forehead, and such heavy eyes, walked through the streets to-day, there wouldn't many people turn to look after her."

"Now, that is what I call a really individual criticism, Miss Poore," said the artist, good-humoredly, "and I have no doubt many would echo it had they your frankness of expression. I have often noticed that the really classic type is not popular among our people."

Almeda felt encouraged. Her attention was next drawn to a group of peasant figures in charcoal, the outlines of which were very sketchy.

"Did you make those?" she asked.

"I have not that honor. I wish they were mine. They were given me by Jean Francois Millet, a short time before he died."

"A real live man you knew made them? Do you suppose he knew any people that looked like that?"

"I have no doubt but he knew many who looked like that to him."

"Mr. Cazenove, you are so good-natured I know you won't get the least bit mad if I ask you something."

"Not the least bit, Miss Poore."

"Why do artists like to make pictures of such horrid homely people?"

"Because," said Cazenove, trying to conceal his broadening smile, while his eyes danced, "artists are poor, foolish men, with a hitch in their minds that prevents their seeing things as the more sensible portion of the world see them. In some of those homely people they think they see things that most other people do not see; so they paint what they see, in hopes that the nice people and the prosperous people may see their meaning and buy them. But as a general thing they get properly punished for their folly, for the nice people seldom have an idea at all of what they are driving at, and let them alone to starve over their own fancies, while they buy from the fellows that have the level sense to paint the pretty, the prosperous and the amusing things. Have I made it all clear to you, Miss Poore?"

"Not very, and I know you are mocking me," said Almeda, bluntly. "If you meant all you say, you would not have painted the sort of things that are here on the wall, for some of them ain't a mite prettier than the other man's."

"Your remark is perfectly logical, Miss Poore. I bow to your good sense and discernment, and assure you that I mean to profit by it, for I have come to Boston with the intention of painting as many pretty and prosperous people as give me good, paying orders."

"Well, when you do that it will be something like," said Almeda, catching something of his mood; and then, skipping across the room, she called Esther to look at something she had discovered in a portfolio.

"Let me congratulate you on your patience, sir," said Mr. Alton, when Cazenove crossed over to where he and Mrs. Reingold sat. "That little girl is something dire, sir, dire!"

"On the contrary, I begin to find her quite refreshing. She seemed on the point of developing unexpected possibilities to-day."

"Yes, possibilities for unheard-of assurance in exhibiting her ignorance."

"But ignorance must show itself in one of two ways, the assured or the tentative, and there is no novelty in the latter method," said Cazenove, in the same bantering tone.

"Do you think there is in the former?"

"Hardly; but it has capacities to amuse."

"I find it impossible to regard the girl even as a joke," pursued Mr. Alton.

"She is not a joke; she is a type, representing a pretty large class."

"Do you think she has possibilities?" queried Mrs. Reingold.

"Possibilities for becoming a self-made American girl? Hardly," he answered, with a droll smile. "Was that what you thought of when you sent for her?"

"I thought of nothing in particular, only to be amused and give some of my friends a mild shock. You know I love to do things out of the hum-drum, regulation manner."

"Just to prove to the hum-drums that you can afford to be eccentric."

"Perhaps, Mr. Mentor."

"Mr. Mentor would like to know why you fancied the girl might prove amusing."

"On the ground that her letter to Esther was the most amusing compound of egotism, self-assurance and faith in others that I had seen for many a day."

"What do you intend to do with her?"

"Send her home, of course."

"Poor little girl! She will feel disappointed. If she only had ability and tact; but she has neither. I fancy she has had nothing from which to draw either. People talk and write and print stuff about persons that rose from ignorance and obscurity to cut a figure in the world, but the obscurity is always overstated. Such people have always some ancestral background, even if remote, to take color from. We painters know that it is the background which projects the picture."

"Mr. Cazenove, how much longer are you going to allow us to stand here without recognition?" called a voice from the doorway; and the artist looked around to see a group of new arrivals headed by Elwell. There were about a dozen in all, and bringing up the rear was a tall, venerable-looking gentleman. The artist gave a hasty greeting to the others, and then taking the old gentleman by both hands, "Welcome, uncle," he exclaimed. "Ladies and gentlemen, to all of you who do not already know of his arrival, let me introduce Mr. Rignald Cazenove, my granduncle."

All had something pleasant to say and many questions to ask of the venerable stranger, and when greetings were at an end Cazenove touched a bell and there entered several colored waiters, bearing trays of tempting viands. Tables were quickly improvised, and all sat down to a merry luncheon.

"I have been to about three dozen luncheons this past winter, and I assure you this is about the liveliest affair of all. It is charming, Mr. Cazenove," spoke one of the young ladies.

"Because it is impromptu and Bohemian, why don't you say, Mr. Cazenove," answered another.

"I thank you for saying it for me," said the artist.

"I don't suppose my opinion counts for much, seen' as I've only been to three luncheons," spoke Almeda; "but this is the first one where they've given me real sensible things to eat. I don't know as I've ate any frogs, as they say they do in France, but I've ate things as queer. But the most ridiculous thing of all, to my thinking, was a dish o' cooked violets. It may be nasty to eat frogs, but 'tain't wicked, and it does seem a downright sin to cook and eat them innocent flowers."

The old gentleman just arrived looked surprised. Mr. Alton looked disgusted, and the others laughed. One young lady added:

"I quite sympathize with you, Miss Poore; I have never had the sin on my conscience of eating them."

"Mr. Cazenove," spoke Mr. Alton, addressing the elder gentleman, with the evident desire of restoring some dignity to the conversation, "you must know a great deal about the South American people, among whom you've lived so long. How do they seem to you? Are they at all civilized according to our standards?"

"Not, perhaps, according to your standards. Their civilization is of another and an older kind; in spirit and tenor that which prevailed at the courts of Europe two or three generations ago."

"It must be very stupid."

"Not so; it is lively, genial and ceremonious."

"But our people generally find it stupid, I understand."

They judge it generally from the outside only. The best society preserves all the exclusiveness of old Spain, and the progressive North American is apt to become very much disgusted on finding how he is regarded."

"What about the native ladies?"

"They are charming."

"But behind the times, of course?"

"Behind the most modern fashions of thought, yes. In attainments they are not beyond what the women of my youth here in my native town were. Younger men might find such women lacking in something; an old fellow like me cannot."

"How delightful to find a man so loyal to the ideals of his youth!" exclaimed Mrs. Reingold.

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"I hope it is not uncommon, madam."

"I'm afraid it is; men are changeable."

"Then modern thought has not succeeded in overcoming all the ancient faults of the sex," said the old gentleman, humorously.

"Pray, tell us more about the ladies, Mr. Cazenove," cried one of the young girls. Are they generous or mercenary, formal or free, and are they allowed to have much choice as to whom they marry?"

"Exclusive to strangers, they are warm friends on proper acquaintance, and very generous of their love where they give it. As conversationalists they are unrivalled. They can make small talk pleasanter and more spontaneous than any women I ever saw. In matrimonial choice, while outer formality is more noticeable, they are not really more restricted than are girls of the higher social class anywhere, while as to mercenary calculations, they might average, I think, about as girls do here."

"Now, that is too bad, Mr. Cazenove," pouted the girl who had questioned him. "Your words leave a suspicion that girls here at home are thwarted or controlled or something in choice, and that they are capable of being mercenary."

"I crave pardon for insinuating anything so atrocious," cried the old gentleman, merrily. "An old gentleman like myself wanders back and forth among past and present at such a rate that he sometimes gets confused. I was thinking, when I spoke, of how rare an occurrence it was, in my younger days here at home, to see any girl in good social standing marry below what was expected of her, or that she could attain, and what a memorable episode it made if one happened to do so."

More than one present involuntarily looked at Esther. The old gentleman seemed to recall her presence too, for he quickly added:

"I think we are all apt to fancy that our neighbors lack some virtue that we ourselves have, and to forget how much like us, barring some slight difference of custom or surface, they are in their social desires and results."

Silence followed his words—such silence as always follows the utterance of something outside our own generally accepted code.

"Harry," said the old gentleman to his grandnephew, and pointing to the spinnet, "that spindle-legged music-box there carries me back to the days when I saw fair fingers run over its keys. Does it still emit sound, or do you keep it merely to correspond with some of your other antiques here?"

"I will request one of the young ladies present to answer that. Perhaps Miss Weld or Miss Wynn will favor us," said the artist.

There was a little playful contest between the two girls as to which should respond first.

Esther insisted that Miss Weld should take precedence, and finally that young lady made the ancient instrument respond to the demands of an intricate and brilliant fugue. The instrument was rather too slight of calibre for the demands made upon it, but its sweetness and delicacy of tone was charming. "Ah, modern progress again. Girls did not play such music as that when I was young. I can't say I understand it, but I feel its power and skill," said the ancient stranger.

Esther yielded to request, and seated herself at the instrument next. Technically, she was not such a player as Miss Weld; she lacked the long, childhood practice that that young lady had had, but even if she could she would not have selected anything so difficult. She gave, with charming expression, one of Mendelssohn's songs without words, and then, recalling an old song of Thalberg's, that her grandmother said had been very popular in her own day, Esther sang it, playing her own accompaniment.

The effect was as delightful as it was unexpected to all present. Esther's voice was a rich mezzo-soprano, under excellent control, and she gave the sentimental little love song with exquisite feeling.

"It is all of thirty years since I heard your mother sing, and you make me feel it is but a day. You are wonderfully like her in voice as well as face," said old Mr. Cazenove, rising and taking a seat beside her as she left the piano.

"Well, of all things, to hear that old-time thing play as well as that!" was Almeda's comment. "When first I looked at it I had no more idea than nothin' at all that anybody could do anything with it."

"I'm sure you will favor us, Miss Poore," said the waggish Weld.

"La, no; not after such playin' as you've heard. I'm only just a common, simple player."

"But we won't accept a refusal on such a plea as that," insisted the young man; and Almeda finally seated herself at the instrument.

"I'll wager you what you please she plays 'The Maiden's Prayer' or 'The Battle of Prague,'" whispered Elwell. And sure enough, Almeda stumbled through "The Maiden's Prayer." When she had finished, she arose and excused herself.

"I told you I couldn't play, and now you see I can't. I haven't played a piano at all, but a house organ, and you know you never can play that with the smooth handling you can a piano. That's why I lack what's called touch."

Nobody smiled openly, not even Mr. Weld as he averred: "You have done beautifully, Miss Poore, and I thank you."

Another gentleman who had been examining a group of Barye bronzes that stood on a shelf near by, turned to look at the girl, and whispered a question to Weld.

"Oh, she is Mrs. Bob's latest funny fad, invited hither from up country to furnish a bit of private theatricals to her friends," replied the latter. "Her name? Her name, oh, friend, is classic—Almeda—one of those immortal maidens that Tasso introduces to us in his enchanted forest!"

"I doubt if Tasso's heroine was any prettier; it's a question if she was more cultured. But women did not need polish to inspire poetry until after the great poems were all written. Heavens, what a pity that a girl like that should be so rapsodically raw!"

[To be continued.]

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Our Household.

EXILED.

EUGENE FIELD.

It comes to me often in silence,
When the firelight sputters low—
When the black, uncertain shadows
Seem wraiths of the long ago;
Always with a throb of heart-ache
That thrills each pulsive vein,
Comes the old, unquiet longing,
For the peace of home again.

I'm sick of the roar of cities,
And of faces cold and strange;
I know where there's warm of welcome,
And my yearning fancies range
Back to the dear old homestead,
With an aching sense of pain.
But there'll be joy in the coming,
When I go home again.

When I go home! There's music
That never may die away,
And it seems the hands of angels,
On a mystic harp, at play,
Have touched with a yearning sadness
On a beautiful, broken strain,
To which is my fond heart wording—
When I go home again.

Outside of my darkening window
Is the great world's crash and din,
And slowly the autumn shadows
Come drifting, drifting in.
Sobbing, the night wind murmurs
To the plash of the autumn rain;
But I dream of the glorious greeting
When I go home again.

HOME TOPICS.



DRY WALKS.—Much dirt would be saved from the floors, and much consequent work of cleaning, if dry walks were made around the house. Of course it takes some

time and money to make these walks, but when once made they will last for years. If nothing better is at hand, coal ashes will make a fairly good walk. Sift the ashes and put the clinkers in first and ashes afterwards. If a curb of brick is laid first, on each side, it will look better. A scraper and a door-mat should be at the kitchen door as a further safeguard. Any man can make a scraper in a few minutes by setting an old hoe, or even a piece of hoop iron, upright in a block of wood. This, with a good husk mat, will save the housewife much sweeping and scrubbing.

BEDDING.—I am not going to talk about different kinds of bedding, but of a device for keeping that already in use neat and tidy. First, in regard to the mattress. Dust will settle around the little tufts and is not easily removed. If there are no very apparent evidences of uncleanness, we know that a mattress which has been used year after year with no special pro-

If a width of muslin as long as blankets are wide be hemmed all around, folded evenly over the end of the blanket or comfort and fastened with safety-pins, it can be removed and washed as often as the sheets, and besides saving much washing of heavy bedding, will add much to the cleanliness of the bed. A friend of mine who travels much, tells me that she carries one or two of these pieces of muslin with her and pins one of them over the blankets of her hotel bed at night, thus saving herself from contact with the covers of the bed, which must necessarily have been used by former occupants of the room.

MOTHS.—The word moth is properly applied only to the winged insect that lays the eggs. It is the larva or tiny worm that hatches from these eggs which does the mischief when the moth mother has deposited her eggs in our furs, carpets or flannels. As soon as the larva is hatched it begins to gnaw the substances on which it finds itself, and of the fragments make itself a case or kind of cocoon from which in time it emerges a winged moth, to fly away and lay its eggs. These moths begin to come out in the first warm days of spring, and the only safe way is to make all winter clothing clean and put it away in close bags of either cotton, linen or paper. These bags, after being sewed or tied up tightly, may be packed in trunks or boxes, or hung in a closet. Carpets that are in use during the spring and summer should be swept carefully and often, especially in the corners and under furniture. If moths do get into a carpet it will be along the edges, and they can be destroyed by laying a wet cloth over and ironing with a hot iron. If you do not take up a carpet in the spring it is well to do this as a precautionary measure.

A HIGH CHAIR.—I do not mean a high chair for the baby, but one for his mamma. Many women do not think of sitting down to do any of their housework, when much of it could be done as well sitting as standing. "Oh, it looks so lazy to sit down," they will say. Who cares how it looks? It is not lazy, and with all the work that a mother and house-keeper must do on her feet, she has no right to do one thing standing that can be done sitting. She ought to have a high chair with a rest for the feet, in which she can sit to wash dishes, iron all the small pieces of the ironing at least, and do many other things. Such a chair will not cost much, but it will save many a backache and many a weary day when the brightness seems to have all gone out of life because the mind and heart can only sympathize with the poor, tired body.

If possible, have a lounge in the kitchen so that you can lie down for a few minutes when very tired. Five or ten minutes spent lying down will rest one more than half an hour in a chair, as the muscles are all relaxed and the whole body rests. If you are young and strong and can work all day on your feet without feeling this utter weariness, keep

yourself so by saving your strength all it is possible and resting whenever you can. It will pay you to do this. Your home will be pleasanter, your children healthier and happier, your life longer. All these combine to add to your husband's comfort and happiness.

MAIDA McL.

THIMBLE PARTY BAG.

This useful article is made of one yard of China silk, six yards of ribbon and one and one half of lace. At the party it serves as an apron and to hold your materials. When through, the top can be turned into the pocket and the ribbons drawn to make a bag.

Turn up a quarter of a yard, hemmed, on the right side, sew up the ends. On the wrong side of the apron run a tuck the width of the hem of the pocket and parallel with it. Through these run ribbons to draw up. In the top make a wide hem, through which run another ribbon. Trim the hems with briar-stitch in silk the color of the apron. This one is of a bright yellow.

FANCY TABLE.

This can be made by any of the boys, as an addition to mother's room. After the pieces are planed and put together it can be painted with enamel paint. The fringe around the edge can be made of fringed rope. The top covered with art linen, embroidered in any desired color. Then it can be turned over to mother or



THIMBLE PARTY BAG.—OPEN.

sisters for the bags. These are convenient for all work—darning or sewing. They can be made of sateen, China silk or canton flannel, according to where you wish to use it. It would be very nice to set at the bedside of an invalid. The bags could contain either her fancy work or handkerchiefs.

Better to weave in the web of life
A bright and golden filling,
And to do God's will with a ready heart
And hands that are swift and willing,
Than to snap the delicate, tender thread
Of our curious lives asunder,
And then to blame heaven for the tangled end
And sit and grieve, and wonder. —Anon.

SOME SPRING DISHES.

SPINACH.—Wash and divide the spinach neatly and put it in an iron pot to cook without any water on it; its own juice will furnish enough. When sufficiently blanched, cut up fine, add a very little butter and salt to it and a tablespoonful of sugar. Turn into a hot dish and garnish with hard-boiled eggs. Serve with vinegar.

RADISHES.—Select firm, red ones, pare off all the leaves except the two prettiest on each radish. Cut away the roots, also a little of the peel around the roots. Divide the remaining peel into five or six leaves, cutting towards the green stems; avoid detaching the stems. Place in cold water till desired; then arrange in a flat dish with the leaves on the outer edge, the radishes meeting in the center. Lay chopped ice over them.—From *Filippini's Cook Book*, "The Table."

ASPARAGUS.—This is from the same work. Boil your asparagus about twelve minutes; then place in a dish with layers of grated cheese. Lightly brown a third of a medium-sized, sound, chopped onion in one ounce of butter and pour over the whole; sprinkle the top with a little cheese and fresh bread crumbs and cook in the oven for fifteen minutes. Send to the table in the same dish.

TOMATOES AND ONIONS.—To one can of tomatoes add six large, sliced onions; cook well a half hour, stirring occasionally; then add a lump of butter, a tablespoonful of sugar, a cupful of cream or milk, with a tablespoonful of flour well beaten in. Serve garnished with toast.



THIMBLE PARTY BAG.—CLOSED.

EGG-PLANT.—Peel and slice the egg-plant in slices one half inch thick; lay in a crock and put a heavy weight upon them for two hours, or over night if wanted for breakfast. When wanted, dip each slice in rolled cracker crumbs well seasoned with salt and pepper; fry in hot lard.

Another way: Cut the egg-plant in half, remove all the center, preserving the shell whole. Chop up the center part fine in a chopping-bowl; mix with equal quantities of bread crumbs; season with salt, pepper and a little butter; return this to the shells, place in the oven in a pan with a little water in the bottom to bake one half hour. CHRISTIE IRVING.

Whene'er a noble deed is wrought,
Whene'er is spoken a noble thought,
Our hearts in glad surprise
To higher levels rise.

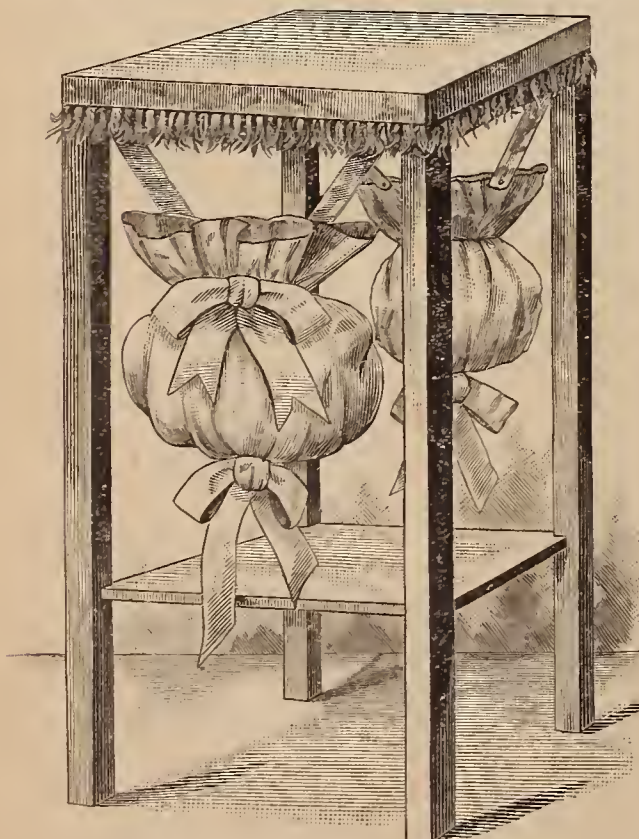
Honor to those whose words or deeds
Thus help us in our daily needs,
And by their overflow
Raise us from what is low.

—Longfellow.

HINTS ON FLOWER CULTURE.

Callas, heliotropes, lilies, petunias, ageratums, coleus, fuchsias and many of the climbing plants are great drinkers; while the begonias, primroses, geraniums, roses, pinks and woody-stemmed plants are more temperate; but when you do water them, do it thoroughly, but not to run a painful through and wash away all the goodness of the dirt. Instead of saucers to the plant crocks, we use a shallow tray (made to fit any window seat or casing), filled with sand, into which the crocks are sunk. The sand takes up any surplus water and holds the moisture in store for the roots as they need it. To keep the dirt perfectly sweet, I use lime water once in two or three weeks. Two tablespoonfuls of slacked lime to one quart of water; let stand until clear before using; this will also destroy the white worms in the earth, and is especially good for the mountain of snow geranium. Some rough-leaved plants do not like to have water sprinkled on their foliage; the primrose especially. Keep free from dust by using a very soft brush and dusting them. A blending brush used by artists is splendid for this purpose; it is so soft it will not injure the tenderest leaf. Dust is a great enemy to healthy plant growth, and must be removed frequently, either by sprinkling the foliage, or washing off with a wet sponge. Always use water that has the chill taken off, in watering plants.

If plants are to be kept healthy and vigorous, they must have lots of light and sunshine. The varieties that do not stand hot sun, give a north window; they must have light just the same. Do not try to root slips, or keep plants in a cupboard, as I once read of a lady trying to do, because the babies dug into the dirt, and broke her crocks, when left on the window-sill. If you do not love plants well enough to study their nature and habits, and are not able to give them the conditions necessary for their growth and development, don't waste your time fooling with them because it is the style. A neglected group of plants is no pleasure to the guest or hostess, rather a monument to her carelessness and lack of little extra study. To the flower lover, garden-



FANCY TABLE.

tection, must be far from clean. Make slips for each mattress of stout, unbleached sheeting or muslin, which can be drawn on and buttoned like a pillowcase. These can be removed and washed as often as necessary, and the mattress may be used for years and still be clean.

ing is a healthy, fascinating occupation; refining in their influences, and lifting up their dear little flower faces in sweet sympathy and gratitude for all the care and labor necessary to their perfect development.

Bless the flowers and flower growers; may their good work continue, and extend through the broad land until every home is an Eden of beauty. Farmers, wake up! with every advantage at your command for lovely home surroundings, I am sorry to say your home does not begin to compare with the city brother, who often pays an enormous price for moss, wood dirt, sand and manure, which are yours for the drawing it home. One day's work would supply material enough to make mother and the children happy for a year, and the small amount of one dollar invested in a wise selection of seeds and plants will make quite an assortment, and there are always good friends eager and willing to help the new beginners with slips and roots, and plenty of advice and helpful hints. Try it, farmer friends; make the home and its surrounding beautiful; *not expensive and grand*, but simply *beautiful*, with nature's adornments, aided by thoughtful training, and our boys and girls will not be crowding towards the city in search of pleasure, amusement and—pleasant homes.

Gypsy.

ROSE TIDY FOR PIANO STOOL.

This is made in sections, and then crocheted together. Crochet a chain of four and join; then make a chain of seven, catch with a double crochet stitch in the joined chain, then chain four and catch again, so on till you have six double crochets around; then chain four and fasten it into the third stitch of the beginning chain. The second row is shells of nine stitches each into the openings of the row before, seven double crochets and a single one at the beginning and end of each shell. Under these shells make chains of five stitches each, fastening them with a single crochet under the beginning of the shells in the former rows. Into these chains put eleven stitches as in the other shells. Next row, make a chain of six stitches, fastening under the shells with a single crochet; into this put twelve shell stitches. Around again with chain of ten and fasten. Over this make in single crochet twelve stitches in each chain.

Next row, fix your stitches so as to make just four divisions of nine stitches and three in the same place; and nine stitches. Then break the thread and do each ray separately. Twelve stitches and three in a place and twelve stitches; turning the work every time across and taking only the back thread, as in slipper crochet. Make twelve ridges or twenty-four rows. The stars to put between are made separately and fastened in when the four blocks of rays are made and joined together.

For the stars, make a chain of eight and join. Around this make eight double crochet stitches with a chain of three between them. Then make a chain of twelve, turn and crochet back up the chain twelve graduated stitches, beginning with a single crochet stitch and making three of them, then three double crochets, then six triple crochets, throwing the thread over the needle twice. The short ray make eight stitches long and crochet the same way.

Finish around the edge with a single crochet stitch, making a chain between every four of three stitches to form a pivot, taking care that the pivots come on the points and at equal distances in the sides. Then carefully join them in the open squares.

BETTINA HOLLIS.

TO SUCCEED IN THE DAIRY.

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MY BOY.

The child I love lies still before me now,
The calm of heaven upon his marble brow.
I take his hand in mine, how stiff and cold,
Not this the pressure that I knew of old.
Low on his pillow my sad face I bow,
And murmur softly, "Sleep, dear child; for thou,
So good, so true, in thy short life did show
In what fond memory the world could hold
The child I loved."
How long the years, O God, how long and slow,
Between my boy in heaven and me below?
Yet in that land I shall again behold,
Not lifeless clay, but in my arms enfold,
With joy no mortal heart can ever know,
The child I loved.

—Somerville Journal.

CRAYON DRAWING—FACES.

When pupils come to take lessons in crayon drawing they generally say they wish, as soon as possible, to make portraits. It is my opinion that some preliminary practice pays for all the time spent on it. To begin on the human face presents so many difficulties to the student at the outset of his career that discouragement is apt to quench his ardor. There is one bit of practice almost essential; that is, the drawing and shading of a ball. If you are able to see the darkest shadow, the high light and the reflected light (generally around the dark edge of the shaded side), then you can successfully undertake to shade the contour of a face, for these peculiarities of the ball are repeated on the cheeks, the chin, the end of nose, on the lips, on the eyeball and on

those used to stretch muslin on, but the stretcher must be fastened at the corners, not keyed. A layer of thin muslin is first put on, pasting it at the edges of the stretcher. The paper must be wet and then pasted likewise; in drying it shrinks and becomes smooth.

If you are going to draw your own outline, make it on a piece of waste paper and transfer it to your stretcher when you are satisfied that it is correct; thus you avoid making erasures on the picture you wish to finish in fine style. If you are going to copy a picture which you wish to enlarge, I refer you to directions in "How to enlarge a picture," an article which has appeared in this paper, or will very soon. It is an open secret that the outlines of most crayon portraits are obtained by means of the camera. Supposing that you have your outline of a face prepared, first take some crayon sauce in a small, shallow pasteboard box, dip your stump in it and apply it to the hair, stroking your stump in the direction the hairs go. If there are waves, observe the difference of lights and shades, and never make it too dark; remember you can easily put on more sauce, but it is tedious to remove it. Having worked up the hair lightly with your stump, put in the pupils of the eyes, the nostrils and the line between the lips. These are the darkest places on the face. Now you must begin to be very careful, for all the shading of the face is soft. Take a piece of cotton and roll it into a ball as

to do that. The better your work is before, the less of pointing there will be to do. After beginning to use the point you must not go back to the cotton or stump or you will have but a smear, while clearness is necessary to a good crayon picture.

The hard pencil, sharpened very fine, is best for the main part of the face. The softer one, which is blacker, may be used around the eyes and perhaps the lips. Remember, you must get the resemblance when you work with your sauce, cotton and stump; the pencil merely gives finish to the effect and is really the less important part.

KATE KAUFFMAN.

CONCERNING WOMEN.

Olive Harper walks with a crutch and has a plain but genial face. She talks with decision and vehemence.

Mrs. Mary Gould Eckhart owns the largest caterer's business in the western division of Chicago, manages it herself, and is noted for the constant invention of new designs in favors and new dishes.

Countess Taaffe, of Austria, has introduced the custom of wearing carved mother-of-pearl hair-pins in order to help the depressed mother-of-pearl industry of that country.

"Carmen Sylva," otherwise her majesty of Rumania, is forty-seven years old. When at home she affects the picturesque costume of the Rumanian peasant.

Miss Minerva Parker, of Philadelphia, who is not yet twenty-four years old, is the architect commissioned to erect the pavilion for the Isabella exhibition at the World's Fair.

When the queen had read "Alice in Wonderland," she personally solicited its author by letter to send her another of his "charming books." Then the droll gentleman, who is a fellow of Christ church college, sent her majesty his treatise on the "Differential Calculus."

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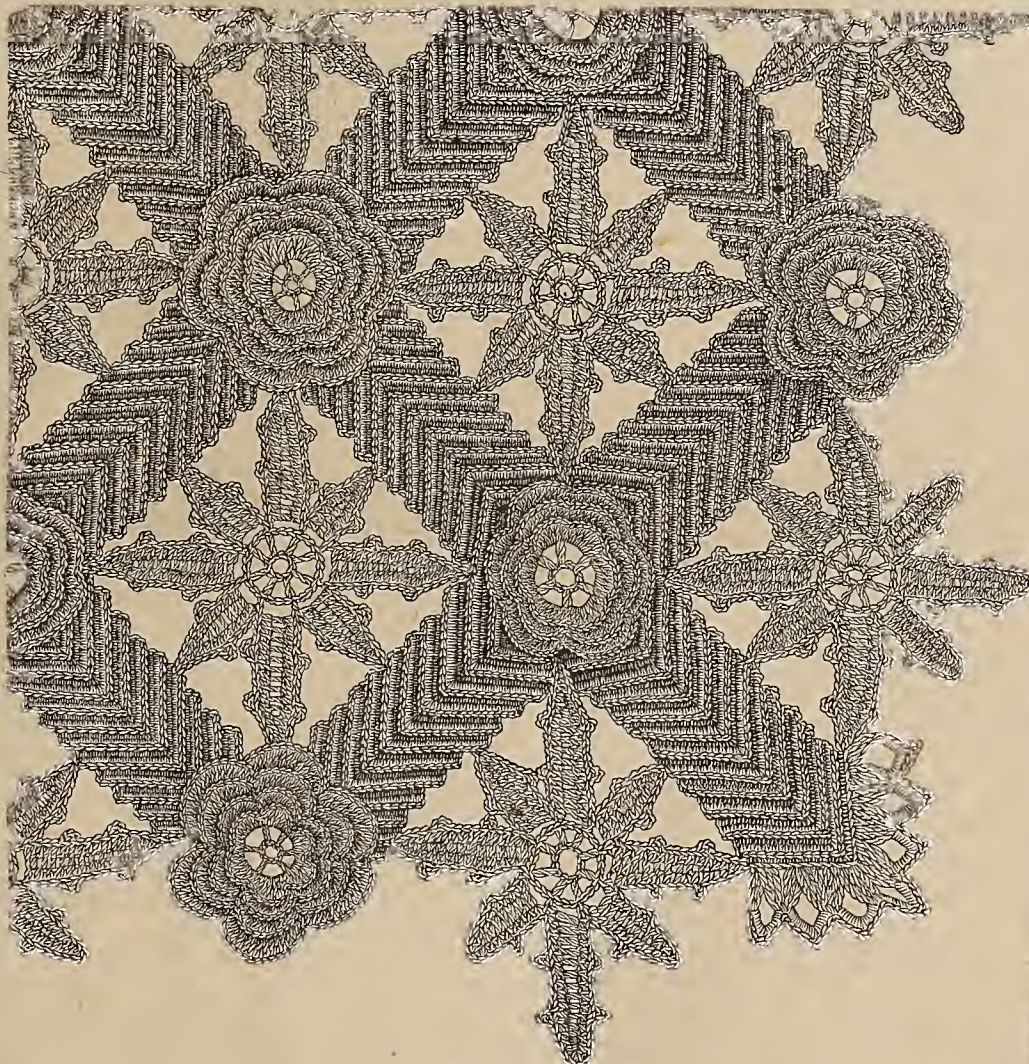
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ROSE TIDY FOR PIANO STOOL.

the lobe of the ear. Then, too, before undertaking a portrait, wherein the expression and resemblance are so necessary to satisfaction, it is better to try an ideal head, which may be very pretty and creditably done, even if the copy has not the exact character of the original.

The material you need is inexpensive, but you must insist on having it exactly right. If your local art dealer has not what I recommend, ask him to send for it, or send yourself to some art store in a city. First, a bottle of Perfection crayon sauce. This is a black powder and costs only ten cents. Next, a rubber having on it "Nigrivorine," five cents. A crayon stump of chamois skin. This will look very much like a cigar. It should be the size of one, or a little less. Two crayon pencils bearing the name Eugene Pearl—one soft, marked by a capital S, one hard, marked H. These are each a dime. Now, with a box of refined cotton, your outfit is complete excepting paper. Use Whatman's, white, and for practice, pin your piece on a large, smooth board. When you come to make a portrait you will wish your paper mounted on a stretcher. Some of my pupils succeed in mounting paper on small stretchers, but when it comes to larger ones, as 24x30 inches, it is best to leave the work to professional skill. A wooden frame is necessary, similar to

large as a small egg. By touching it a few times on the hair you will likely get sufficient sauce to use on the shading of the cheeks. Take a smaller piece and use about the eyes and on the ears and neck. If you can clean your stump, or keep one end of it for such a purpose, you might use it again around the eyebrows, the eyelashes and the ear. Most artists, after a little experience, invent tools of their own. A bristle brush of small size, with the hairs bound together within a short distance of the tip ends, makes a good tool for rubbing in the sauce. At this point description is almost impossible. Every little wrinkle and wart, or dimple (if the subject is a beauty) must be shaded in carefully. Your little Nigrivorine rubber is better if you cut off the surface at the end. It will remove superfluous shading. You must squint at your picture (I really mean it), or you must walk back from it to get the effect across the room. You must be honest with yourself and confess if it doesn't look right; you must be willing to humbly take the criticisms of surrounding friends. Try to keep the whole picture in a harmonious degree of finish. Do not make one part as dark as it will be when done, while another part is very pale. Gradually strengthen the general effect.

The work with the sharpened pencil is the final process, but do not be impatient

Our Sunday Afternoon.

TOO LATE.

WHAT silences we keep year after year. With those who are most near to us and dear;

We live beside each other day by day, And speak of myriad things, but seldom say The full, sweet word that lies just in our reach, Beneath the commonplace of common speech.

Then out of sight and out of reach they go— These close, familiar friends who loved us so! And sitting in the shadow they have left, Alone with loneliness and sore bereft, We think, with vain regret, of some fond word That once we might have said and they have heard.

For weak and poor the love that we expressed Now seems, beside the vast sweet unconfessed; And slight the deeds we did to those undone, And small the service spent to treasure won, And undeserved the praise for word and deed That should have overflowed the simple need.

This is the cruel cross of life, to be Full-voiced only when the ministry Of death has been fulfilled, and in the place Of some dear presence is but empty space. What recollected services can then Give consolation for the "might have been?"

THREE PAIRS OF SHOES.

HERE they are, in a neat little row under the mantel in the children's bed-room, a pair of twelves, a pair of nines and a tiny pair of fives, belonging to the baby. They are all more or less wrinkled and worn, and the pair of twelves have holes in the toes, which caused me to say a little while ago to the sturdy wearer of them, that there was "no sense in his kicking out shoes like that," and if he was not more careful he would just have to go barefooted. He heard me with the utmost indifference, as I know from the fact that the threat was hardly out of my mouth when he asked me if I knew whose little boy he would have been if I had never been born.

"You might have been the little boy of some papa who couldn't have bought you any shoes at all," I said reproachfully.

"Oh, well," he said calmly, in the fullness and beauty of his childish faith, "God has millions and millions of shoes, and I could just ask him for a pair whenever I wanted them. Don't you see, papa?"

Three pairs of shoes! Three pairs of tender little feet upon the untried border of life's mysterious land. I sit and look at the little shoes, wondering where the feet that wear them will be led in the time to come—the little feet that

Through long years

Must wander on, 'mid hopes and fears.

How much would I give to know the future, that I might stand between them and the temptations so sure to assail them, that I might guide their feet aright, that I might shield them from pain and sorrow, if I could! There is something strangely appealing and half pathetic to every loving father and mother in the sight of a row of little shoes like those I see before me now. They arouse the tenderest instincts of one's nature. I don't know why.

The wearer of the little shoes may have been very fretful or mischievous or trying all day. You may have been "all out of patience" with them. You may have whipped the little hands or put the rebellious little ones to bed, declaring that they were "worrying the life out of you;" but they are not worrying you any now, and you go about picking up a little stocking here and a little skirt there, with nothing but tenderness in your heart toward them. You think only of how precious the wearers of the little clothes are, and there is no melody on earth one half so sweet to you as the music of the baby voices when they knelt around you a little while ago, saying: "God bless mamma and papa and keep us all safely through the night." You will hear no sweeter music than that this side of paradise."

You reproach yourself for your lack of tenderness and patience as you look at that little row of shoes, and sometimes you fall to thinking of the unutterable sorrow that would fill your heart to breaking if the wearer of any one pair of the little shoes would wear them no more—if you should awaken some morning, as heart-broken fathers and mothers have sometimes awakened, and find that the wearer

of one pair of the little shoes had gone from you in the night, to wear the garments that wax not old.

Three pairs of little shoes! There are tears in your eyes as you look at them now, and perhaps you steal softly to the bedside of the little sleepers, to make sure that they are sleeping sweetly and safely and to touch their little hands or their cool, moist brows with your lips, your heart filled with tender memories, with hopes and fears, with unspoken prayers. Three pairs of little shoes! Three little pilgrims just setting out on the voyage of life, their frail barks as yet untouched and unharmed by adverse winds and waves. God bring them all to port!—*Detroit Free Press.*

IS SOLOMON'S OPHIR TO BE REOCCUPIED?

The expedition dispatched during the summer by the British South African Company, and which by this time must have reached Mashona Land, is interesting, not only from a political and commercial, but also from an archaeological point of view. Mashona Land, it will be remembered, is the country bordering the southern bank of the upper Zambesi, which, by the recent partition treaty with Portugal, has been made British territory.

It is known that this region is well watered, that the soil of the valleys is exceedingly fertile, and that, owing to the elevation of the tract, the climate is temperate and endurable by Europeans. A hindrance to its development has hitherto been the distance—1,500 miles—by the land route from Cape Town, via Kimberley. This was the route followed by the South African Company's expedition; but the quick and easy way of reaching the country is by the ascent of the Zambesi, and this will of course be taken, now that this great river has been thrown open to navigation by the treaty with Portugal.

Although as yet Mashona Land has been very imperfectly explored, gold has been discovered in considerable quantities. It is, in fact, the verified presence of gold which has caused the present expedition. To the scholar's eye, however, the most noteworthy feature of this region is the large number of very ancient stone forts. Among the present inhabitants of the country there is not even a tradition as to the builders of these prehistoric walls. They are made of uncemented stones, carefully hewn and laid with some pretension to architectural effect.

The mason work of these structures is so entirely unlike that of any native tribe that it is commonly attributed to colonists from Asia, who ascended the Zambesi many centuries before the Portuguese explorers. On this account, archaeologists are inclined to believe that in Mashona Land should be recognized the long-sought Ophir, the veritable site of King Solomon's mines. It is believed by scholars that the Axiomites, who inhabited the south-west corner of Arabia, and who colonized Abyssinia long before the Christian era, had trading-posts dotted all over the east coast of Africa, and were equipped with the means of ascending the Zambesi in quest of gold. Moreover, the extant ruins of their mason work in Arabia shows that they were quite competent to build the stone forts now encountered in Mashona Land.

SYMPATHY WITH SUFFERING.

Unless there be some sympathy with suffering, there will be nothing done for its relief, and the ties of human brotherhood will be quickly sundered. If it is a blessing that we are unable to feel the full force of another's sorrow, it is no less a blessing that we have the capacity of feeling a part of it. And this capacity usually needs development, rather than restraint. For a few who may grieve unwarrantably for their fancied insensibility, there are multitudes who are sadly deficient in sympathy and never grieve at all about it. It should never be forgotten that all social happiness, all mutual benefactions and all true benevolence, are founded on the presence of sympathy. Were it not for this we should all be miserable and misery-giving egoists.

THE ANGELUS BELL-RINGER.

When traveling in the forests of Guiana and Paraguay, it is not uncommon to meet with a bird whose music greatly resembles that of an Angelus bell when heard from a distance. The Spanish call this singular bird the bell-ringer, though it may be still more appropriately design-

nated as the Angelus bird, for, like the Angelus bell, it is heard three times a day—morning, noon and night. Its songs, which defy all description, succeed one another every two or three minutes, so clear, and in such resonant manner, that the listener, if a stranger, imagines himself to be near a chapel or convent. But it turns out that the forest is the chapel and the bell a bird.

The beauty of the Angelus bird is equal to his talent; he is as large as a jay and as white as snow, besides being graceful in form and swift in motion. But the most curious ornament of the Angelus bird is the tuft of black, arched feathers on its beautiful head. This tuft is of conical shape and about four inches in length.

UNANSWERED PRAYERS.

"Silver and gold have I none; but such as I have I give thee—rise and walk." This was not what the suffering beggar asked, but a gift how far more precious! A cure in the stead of a temporary relief! It is even so the God of pity answers our prayers. When the hand of sorrow is heavy on us, when some great evil presses and our need becomes extreme, we cry to him for help. The petition for relief on earth is perhaps refused; that which we would have is denied; the affliction is continued, and the pressure must be borne. But there comes in the midst of it a far richer gift. We are healed—our hearts are converted, our sins forgiven—we are weaned from earth and made meet for heaven. Ah! who would not encounter such refusals? Who would be so senseless as to doubt if they are gainers by their sufferings? He who asked alms would surely not have preferred the silver and the gold.

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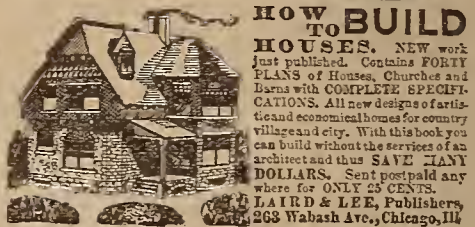
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Conducted by P. H. Jacobs, Hammon, New Jersey.

DYING IN THE SHELLS.

When chicks die in the shells there is a loss of both eggs and chicks. When eggs from immature pullets are used, or eggs from inbred stock, or from stock in which the male or the hens are lacking in some essential, there will be loss of chicks during incubation. One of the mistakes usually made is in supposing that eggs must have moisture; that is, the eggs must be in the presence of damp earth, or resting on it. The eggs under hens are therefore sprinkled, while pails of water are kept in incubators to supply moisture. Recent experiments show that during incubation the moisture (water) in the egg is rapidly given off, and near the end of a hatch test show a very large air space at the large end of the egg. The chick does not fill this space, but seems packed in the egg lower down. When too much moisture is given the chick grows more than it should, and becomes too large to remain in the egg and not sufficiently developed to come out. The conclusion is that no moisture is necessary for incubation unless in extremely dry locations, and then not so much with a view of supplying moisture as to prevent too much evaporation from the egg.

Chicks will die in the shells, however, despite all that can be done, as there are so many conditions regulating incubation which cannot be all complied with. A chick may inherit weakness from its parents, or the eggs used may not be of normal size, or perfect in every respect. If a dozen hens are sitting at one time it will be found that all are not equally successful in hatching. Some will hatch every egg while others will bring off but few chicks. Even the temperatures of the bodies of the hens vary. An egg is a wonderful thing, and no one can predict in advance what it will bring forth.

EGGS IN SPRING AND SUMMER.

The spring is the natural period when hens will lay, if they ever will do so, and those that do not now lay are not in proper condition, being perhaps, as is usual in a majority of cases, overfed and fat, which is more detrimental to egg production than any other cause. The eggs should cost less in the spring and summer, as less food is required to keep a hen in the warm season. Turn the hens out to forage, and make them hunt and search for food. Give no food except at night, when a quart of corn to twenty hens should be sufficient. A lot of active and industrious hens should be able to find all that they require during the warm season. Not only will insects provide a portion of the food, but all classes of poultry will eat grass and other green foods, and need not be hungry at all. It is when the hens are given liberty and made to work for themselves that they thrive best and lay the largest number of eggs.

COMMISSION MERCHANTS.

Many readers write us for the address of commission merchants, and asking where to sell. Unfortunately we have no means of knowing who are and who are not reliable merchants, nor have we any lists or directories of merchants. Enterprising merchants make themselves known by advertising, as must all who expect to do business. Our mission is to teach the readers how to produce the largest proportion of poultry and eggs at the lowest cost. The matter of selling the produce is something each individual must solve for himself, as it is outside of our province.

CORN MEAL FOR CHICKS.

Corn-meal dough is not sufficient food for chicks, but when each mess of the corn meal is mixed with fresh milk, instead of water, the value of the mess is increased. Chicks should, however, have a variety of food, and will eat any kind of seeds or small grain, especially broken wheat. Milk is excellent, but the chicks are liable to get wet with it, or the milk may become too sour and breed disease. If mixed with corn meal, and the mess eaten up clean, the chicks will relish it and thrive on the mixture.

CHEAP DISINFECTANTS.

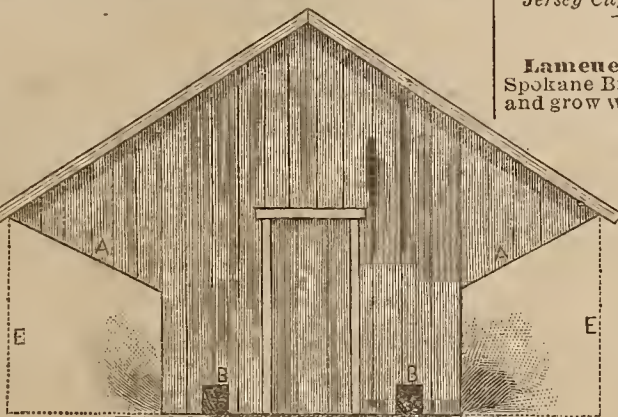
To thoroughly disinfect the yards occasionally would prevent many diseases. Such work need not be expensive. It is best done with a sprayer, or force pump for that purpose, as a fine spray over the poultry-house and over the ground will reach every spot. But even a watering pot will answer in an emergency. Use any kind of disinfectant, such as the Bordeaux mixture, or a solution of chloride of lime. A cheap mixture is made by dissolving a pound of copperas in two gallons of boiling water, and sprinkling it whenever required.

GOLDEN WYANDOTTES.

The Golden Wyandotte is similar to the Silver (or well known) Wyandottes, except that where white exists in the silver variety it should be yellow, or golden, in the golden variety. All Wyandottes should have rose combs, which should curve back so as to follow the shape of the skull, also yellow skin and yellow legs that are clean of feathers. Wyandottes are compact birds, about a pound smaller than Plymouth Rocks, and are excellent market fowls, as well as good layers and sitters.

A CONVENIENT POULTRY-HOUSE.

A house constructed so that the roosts can be cleaned without going inside, is sent us by Mr. G. S. Wheeler, California. The illustration presents an end view only. A A are the roosts, and B B the ingress holes. It can be made of any length or size desired. The dotted lines, E E show that the portion under the roosts may be enclosed as a shed; or posts (for support) attached if necessary. The nests



are arranged at the rear, or in front of the roosts, inside, the nest being covered, the hens entering the nests from the ends, thus using the tops of the nests as steps to reach the roosts, which slant, as shown in the illustration.

RULES FOR YOUNG TURKEYS.

Keep them dry, as dampness is fatal to them. Look for lice every day. One large louse on the head of a young turkey will kill it. Feed on stale bread dipped in milk, curds, finely-chopped boiled egg, chopped onions, and place a little wheat and cracked corn where they can pick it, as well as some fine gravel. Feed every two hours at first, but do not feed enough to waste. Give clean water, but be careful that it is so given that the turkeys will not get wet in any way. Keep the coops very clean.

FEEDING ANIMAL MEAL.

What is known as animal meal is prepared from meat taken from the slaughter houses, dried and ground. It is excellent for all kinds of poultry, and especially for laying ducks. Avoid feeding it too liberally. A half pound, once a day, for a dozen hens, is ample, where the hens have access to green food. Much of the animal meal sold contains steamed bone, and is therefore an excellent food for providing lime for the shells. It is sold for about three cents per pound.

TREES IN THE YARDS.

It will be an advantage to set out a few trees in the poultry-yard, and as this is the season when it may be done, we suggest peach or plum trees for the purpose, as they grow rapidly, soon provide shade for the fowls and come into bearing soon, and really take up no space in the yards.

WORMS IN POULTRY.

Poultry of all kinds are affected with worms, not only in the intestines, but sometimes in the flesh. How the worms originate, or how they find lodgment in

the flesh, is not known, but they may come from substances eaten or from contact with afflicted fowls, as the droppings may be a source. The best remedy is a teaspoonful of spirits of turpentine in a quart of corn meal, made into dough and fed once a day to twenty fowls.

CORRESPONDENCE.

RECORD OF EIGHTY HENS.—For one year, commencing November 1st, 1889, with eighty hens, I received 1,005 dozen eggs, the total amount received being \$198.31, and the cost of feed \$53.46, leaving a profit of \$144.85, or about \$1.81 per hen. The hens are White Leghorns, and the receipts include eggs used in family and for hatching. E. S. N. De Ruyter, N. Y.

A POULTRY-HOUSE.—I notice in your paper many inquiries regarding poultry-houses for 100 hens, or for a farm. I have one I will give you. It should be 14 feet square, or 14 feet wide and as long as you want it. It is 6 feet high, then from each side 2½ feet. Commence and board up 2½ feet, then put up perches for the chickens to roost on. Boards under the roost keep the dirt off of the nests. Under this is the place for the nests and young chickens. There are three doors in front, one window in the rear, and little doors in the partition. J. Q. A. Linn, Kan.

CHOLERA.—When my fowls have cholera I use white oak bark. I take a lot of bark, put it in a pot of water and boil it down until it is a strong solution. I then use a little in the drinking water, and find it a most excellent preventive and equal to any other cure. Littleton, Iowa. Mrs. M. S.

A BEGINNER'S ACCOUNT.—As we are new beginners we send you our account of operations. We started with seventeen hens, and at the end of the year, after having used quite a number ourselves, we realized \$35 cash and now have thirty-four hens. Mrs. H. J. Jersey City, N. J.

INQUIRIES ANSWERED.

Lameness of Chicks.—Mrs. F. F. M., Spokane Bridge, Wash. "My chicks are lame, and grow worse, but have good appetites."

REPLY:—It is due to rapid growth perhaps, as well as dampness.

Flaxseed.—Mrs. H. J., Jersey City, N. J. "Is flaxseed suitable as food for poultry?"

REPLY:—It is too expensive as regular food. It is beneficial if given occasionally, as a change.

Too Fat.—D. M., Claude, W. Va. "My hens are fat but do not lay. Are guineas profitable?"

REPLY:—Fat hens seldom do lay regularly. Guineas have but little sale in market.

Cooked Food.—G. R., North Washington, Iowa. "Is cooked or steamed food the best for fowls?"

REPLY:—It is more digestible but not necessary, though excellent.

Ducks Too Fat.—W. L. W., Stephens City, Va. "Why do my ducks not lay? They are very fat, but do not lay."

REPLY:—They do not lay owing to being in a fat condition.

Leghorn and Langshan.—J. H. S., Lawrence, Kan. "Is a cross of Brown Leghorn and Langshan a good one?"

REPLY:—Yes. Use a Leghorn male and Black Langshan female.

Heat in Incubator.—G. A. W., Burlington, Iowa. "How high can the heat in an incubator rise without destroying the eggs?"

REPLY:—As high as 112°, for a short time only, will not be necessarily fatal.

Fowls Dying.—Mrs. M. S., Littleton, Iowa. "Please state why my fowls die. Though fat, are not apparently sick."

REPLY:—Difficulty is probably due to fowls being overfed, causing indigestion and liver disease. In a fat condition fowls often die suddenly.

Crosses.—M. E. S., New Hampshire, Ohio. "Will a cross of Leghorn and Brahma be a good one? If so, which breed should the male be?"

REPLY:—The cross is one of the best. Use the Leghorn male.

Turkeys and Ducks.—F. K., Rochester, N. Y. "(1) Which is the better, the White Holland or Bronze Turkey? (2) Also the Rouen or Pekin duck? (3) When is the best time to set turkey and duck eggs?"

REPLY:—(1) The Bronze. (2) The Pekin. (3) April.

Incubator Lamps.—D. H. L., Belleville, Ohio. "Why do the lamps sometimes go out suddenly, when turned down to keep the temperature in the incubator at 103°?"

REPLY:—Lamps are not secure unless the wicks are kept clean, the oil chamber full and plenty of air allowed to reach the point of combustion.

Muscovy Ducklings.—S. J. H., Hiawatha, Kan. "We set some Muscovy duck eggs in an incubator, but the ducklings died in the shell. They did not hatch in three weeks."

REPLY:—Muscovy duck eggs require over four weeks for incubation, or the same as for goose eggs. You probably use too much moisture in the incubator. They need very little moisture before the twenty-fifth day.

WHY THE HORSE DIED.

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FOR HORSES—It has no equal for DYSPEPSIA, Heaves, Loss of Appetite, Coughs, Fevers, Pink Eye, WORMS, Roughness of Hair, etc. FOR CATTLE It increases the Quantity and QUALITY of MILK. FOR CHICKENS—It has no equal. It makes them lay. For sale by all dealers. Sample packages sent prepaid on receipt of price, 25 cents. Send for pamphlet. Address **C. W. Nick, Apothecary, Erie, Pa.** Mention this paper when you write.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Beet Sugar Journal.—A. P. M., Auburn, Ill. The *Sugar Beet*, Philadelphia, Pa., contains the information you desire about the culture of sugar beets.

Leaf Mould for Melons.—J. B., Hillsboro, Ill., asks if leaf mould and woods earth are good for melons, to be put in the hills. It is, especially on very sandy soil. On clay I would use as much sand as possible with it.

Cotton-Seed Meal.—F. S. H., Atlanta, Ga., in answer to a query about cotton-seed meal, says that it is worth, at the oil-mills near Atlanta, free on board cars, \$19 per ton. There is some difference in quality, and some can be bought cheaper.

Soapsuds as a Fertilizer.—J. M., Viue-laund, N. J., writes: "In regard to soapsuds from a woolen-mill, I have seen good results where the suds were conveyed by gutters over the surface in the fall and early spring. The corn grew very rank. The land was plowed quite deep."

Sunflowers.—W. R. C., Hope Valley, writes: "Please inform me if the sunflower, when planted in large quantities, is injurious to the soil in which it grows? Such is the opinion which I have heard expressed regarding it."

REPLY:—It is not specially injurious that we know of. A heavy yield of any crop is exhaustive of soil fertility.

Dry Bones as Fertilizer.—P. G., Sr., Harrison City, Pa., writes: "I have a large amount of dry bones on hand. Would it be wise to burn them, powder them and use for plants?"

REPLY BY JOSEPH:—Burning is probably the simplest and cheapest way of reducing old bones to powder, and thus fit them for the gradual use of plants. Other methods are usually inconvenient and tedious.

Value of Compost.—J. D. W., Kappa, N. C., writes: "What is the value of a compost made from forest leaves and rotten straw, with some lime?"

REPLY BY JOSEPH:—I do not think the lime would add anything to the value of the compost, and if I wanted to use lime on the land, I would apply it separately. The compost will not materially differ in composition and value from ordinary barn-yard compost.

Kidney Beans.—L. C. P., Stony Man, Va., writes: "Can white kidney beans be raised profitably in this part (Page county) of Virginia?"

REPLY BY JOSEPH:—Yes, but the outcome is always more uncertain than if you plant the ordinary white field beans, like White Marrowfat, Navy or Burlingame Mediums. Success depends on the cultivator, just as it does with all other crops.

Frogs Coming Down in Rain.—J. R. G., Bovenston, Tenn., wants us to explain the phenomenon of fish and frogs falling during a storm. The explanation is simply that the story isn't true. During a dry time some of the creeping and hopping things, like frogs and lizards, hide away in the ground, or elsewhere in moist spots, and suddenly appear in large numbers at the first fall of rain. This has given cause to the fable of the "frog rain."

Transferring Bees—Purifying Water. L. E. T., South Forecastle, Ohio, writes: "Can bees be transferred out of a gum into a box hive, and how?—How can water in a well be purified from small, white insects, about the size of a pin head?"

REPLY:—Any good hook on bee culture will give you good methods of transferring bees from box hives, which can be safely and profitably done. Your question indicates that you need such a book. You can get one from this office or from A. I. Root, Medina, Ohio.—The insects, or more probably worms in your well, can be destroyed by putting in some fresh lime. After it is slacked and the water stirred up thoroughly, pump the water all out. It may be necessary to pump the water all out two or three times before the well will be fit to use from.

Irish and Sweet Potatoes.—T. B., Tenn., asks: "What is the best way of raising sweet potatoes on thin land? Should the manure for Irish potatoes be put above or below the seed?"

REPLY BY JOSEPH:—Sweet potatoes can be grown on thin soil by putting plenty of good compost into each hill or row, and setting good plants over it, or by mixing a high-grade, complete manure liberally with the soil in each hill. Whether fertilizer should be put above or below the seed pieces in growing Irish potatoes is yet an open question. The indications are that the best results, on an average, are obtained by covering the seed pieces lightly with soil, and then strew the fertilizer, compost or whatever it is, on top.

Bone Meal and Ashes.—N. G. S., McMillanville, Tenn., writes: "I have a quantity of hen manure which I wish to combine with equal parts of bone meal, landplaster and leached ashes, not to be mixed until used. How much of each should be used for a corn fertilizer, to be applied in the hill?"

REPLY BY JOSEPH:—Hen manure is a good fertilizer for corn or any other crop, and complete in itself. Use it as freely as possible. Landplaster in this connection does not usually amount to much, and at any rate need not be applied, except in a small quantity, to the hen manure as it accumulates under the perches. In most cases a larger percentage of the ashes will be found better. Try one hundred pounds bone, two hundred pounds ashes, and from five hundred to one thousand pounds of hen manure. Scatter well around the hills and as liberally as possible.

Garden Queries.—W. W., Hotchkissville, Conn., asks these questions: "What will kill plant lice on cabbages? What is the best fertilizer for tomatoes? What will prevent tomatoes from cracking and decaying on the vines? What will prevent cucumber leaf blight?"

REPLY BY JOSEPH:—Spray the cabbages with kerosene emulsion or kerosene extract of insect powder (buhach), or strong tobacco tea. A good barn-yard compost will do very well for tomatoes; so also will a high-grade, complete fertilizer of unleached wood ashes and bone-dust. Try to prevent the tomato blight and rot and the cucumber leaf blight by spraying with Bordeaux mixture. Good knapsack sprayers are now advertised by several parties. The Bordeaux mixture, ready for dissolving with water, is put up by W. S. Powell & Co., Baltimore, Md. This is a very convenient way to get it.

Fertilizer Queries.—G. E. W., Port Carbon, Pa., asks: "What is the value of yellow pine wood ashes as a fertilizer for potatoes? Will water extract any of their fertilizing powers? How should they be applied? Which of the ingredients in our concentrated fertilizers promotes the growth of roots, which of the stalk and which of the fruit?"

REPLY BY JOSEPH:—Fresh, yellow pine ashes are probably worth \$10 to \$12 per ton, as compared with other commercial fertilizers. If leached, they are not likely to be worth more than \$3 or \$4 per ton. Plants need all three of the chief plant foods contained in manures. Nitrogen, however, promotes luxuriant, succulent growth, while the mineral elements—potash and phosphoric acid—tend to make a firmer growth of wood and root. Phosphoric acid also hastens maturity.

Hen Manure.—G. W. P., Akin, N. Y., asks: "Is it a good plan to put hen manure, which is intended to be dropped in the corn hills, in a pile to heat a couple of weeks before using, stirring it every few days? Will it not lose some of its ammonia in this way? We have been in the habit of treating ours in this way, and just before using we mix plaster with it to dry it."

REPLY:—By your plan much of the ammonia, the most valuable part of hen manure, is lost. Collect the droppings and mix plaster with them as fast as gathered. The plaster will fix and save the ammonia. It is not necessary to put it in piles and let it ferment. If intended for putting in the hills, collect it, mix plaster with it, dry it and save it in barrels or boxes. Before applying it can be spread on a floor, the lumps clobbered up fine with a hoe and the coarser parts sifted out, if you want it to be in as good shape as commercial fertilizers.

Kerosene on Seed Corn.—W. H. S., Augusta, Ill., writes: "I have read about an old farmer who, in planting his corn, every time he filled the planter boxes, put a teaspoonful of kerosene on the corn and stirred it so every grain got some of the oil. While his neighbors had to replant their corn, his came up all right and was not touched by bugs, moles or insects. Now, do you think that would work all right? If so, wouldn't you put more oil than that on the corn, or would it injure it?"

REPLY:—That seems to be claiming entirely too much for the small amount of kerosene each grain receives. Few enemies attack the grain alone when in the ground. We do not see how cutworms, for instance, would be prevented from working on the young, growing corn. The amount of kerosene to each grain is certainly not enough to protect the growing plants, however well it may repel enemies from the corn itself. Nor do we think it safe to use very much kerosene on seed corn. A word from those who have tried this plan is desirable.

Harvesting Orchard Grass.—B. F. M., Goshen, Ky., writes: "In your issue of April 1st is a request by A. C. W., Hugo, Ill., for information in regard to the saving of orchard grass seed. In this section orchard grass is raised in large quantities, and the annual sale of seed is many thousands of bushels. I have been a grower of the same for twenty years myself, and am therefore fully competent to answer the above. Cut and bind it as you would wheat or oats, when three fourths of the heads have turned a brownish color. Set it up in shocks of three bundles each, and tie around the top with a straw band, to prevent the wind from shattering out the seed. In ten days or two weeks of fair weather it will be ready for the thrasher. Any machine used for wheat will thresh orchard grass by having a riddle made for the purpose; that is, one with smaller meshes than are usually sent out from the factory. Be careful when starting your thrasher to close up the fan holes and shut off most of the wind, or the seed will be wasted. Most of our farmers thresh from six to eight hundred bushels per day."

Mr. W. R., also of Goshen, Ky., sends an answer to the query, which gives practically the same methods. Both will please accept our thanks for kindly furnishing our inquirer with the desired information.

FLORAL QUERIES.

ANSWERS BY GEO. W. PARK, LEBONIA, PA.

Soil for Geraniums.—A. McC., Mo., writes: "What is the best soil for geraniums?"

REPLY:—A good, clay loam, well enriched with stable manure.

Cinnamon Vine Bulblets.—J. Kelly, Ill. These may be kept in any frost-proof place over winter. A dry cellar, where potatoes will keep, will answer for them.

White Flies on Roses.—M. S., Oberlin, O., writes: "Please tell me what will rid rose bushes of white flies. I have a house rose that is infested, and every summer my climbers are almost ruined by them."

REPLY:—Spray the plants with an emulsion of kerosene and soapsuds. The suds should be made from home-made soap, with one twentieth its bulk of kerosene. If only a few plants are infested, a weak solution of camphor will be quite as effectual, though more expensive. The liquid should be sprayed upon the foliage with considerable force, so that it may reach all parts.

Propagating Clematis Jackmanni.—J. K., Illinois, wants to know how clematis Jackmanni is propagated. There are several ways. Usually the most successful for the amateur to adopt is by layering the vines in summer; that is, bending the vine down, cutting a slit in its under surface, and covering the wounded part for several inches with earth. This operation should be performed during the early summer months, and by autumn the vine will be rooted and ready to be detached from the parent stock, which may be deferred till spring, the most successful time for transplanting. The vines may also be propagated by root grafting, by cuttings of the partially ripened wood, and by seeds. The seeds start tardily, after lying dormant for two or three years before germinating.

Paeonies Not Blooming.—P. M. G., Kingman, Kan., writes: "Please tell me what is the reason my paeonies do not bloom. I brought the roots from the east seven years ago. They were prolific bloomers there, but they have never bloomed since I brought them west. The soil I have them in here is as rich as that I took them from, and every spring they have budded nicely, but the buds soon get black and dry up. Will some one please tell me what is the cause and also give a remedy?"

REPLY:—Plants often fail to develop their buds when the soil about the roots becomes heated by the action of the sun's rays. Such plants should be given a place on the north side of a fence, where they will be partially shielded from the sun. A dressing of bone-dust and a liberal mulching of straw or coal ashes may remedy the trouble. Even a thorough and frequent stirring of the surface soil during the budding and blooming period may be effectual in developing the flowers.

Insects.—A. M. McC., Mo., writes: "What will keep insects off my house plants?"

REPLY:—Use a good syringe two or three times a week, spraying the plants with pure water. If this is not effectual, use a liquid composed of soapsuds and kerosene oil. Make the soapsuds pretty strong, using the old-fashioned, home-made soap, if procurable, as the patent soap is often poisonous to the plants. Add about one twentieth the quantity of suds of kerosene oil, and mix thoroughly with the syringe. This is the best insecticide for all purposes with which we are acquainted. It will destroy green fly, thrips, mealy bug, red spider, and in fact nearly all insect pests. It should be dashed upon the plants with a good syringe, an almost indispensable article to the cultivator of plants.

Butterfly Orchid.—Mrs. G. W. B., Creston, Ill., writes: "I have two bulbs of the butterfly orchid, and do not know how to start them. Will you please answer through the columns of your paper as soon as possible? I have been told to put moss on boards or bark, but do not know how to fasten the moss so as to hold the orchid bulbs."

REPLY:—What is known as butterfly orchid is a species of oncidium. It requires a hot-house temperature, and may be grown in moss tied to a piece of board or in shallow baskets of moss, rotten wood and fibry peat. The moss should be spongy, and some of the materials mentioned may be mixed with it before it is attached to the block. To attach securely, fine copper wire may be used, wrapping it over the moss after the plants are placed. After attaching, the block may be bung up where the plant will enjoy a warm, moist atmosphere. Winter temperature 58° to 65°, summer temperature 60° to 90°.

VETERINARY.

Conducted by Dr. H. J. Detmers, Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through the columns free of charge. Where an immediate reply by mail is desired, the querist should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Stringhalt.—J. A. Vorsworthy, Looxahoma, Miss. Stringhalt, once fully developed, is incurable.

Collar-boil.—Such a collar-boil cannot be removed by external applications; it requires a surgical operation. Hence, employ a reliable veterinarian.

So-called Thumps in Pigs.—G. M., Liberty Ridge. What you call "thumps" is probably a symptom of swine plague, or so-called hog cholera.

A Horse that "Grips."—H. F. S., Two Taverns, Pa. I do not know what you mean. What is "grips?" Do you mean to say that your horse is a cribber? If so, I have to say there is no remedy.

A Worn-out Horse.—P. C. S., Malvern, Ark. If you have a good pasture, the best you can do is to turn your horse out and let him have the benefit of the young grass, etc., until fly season comes, when you have to take him up again.

Partial Luxation of the Patella.—W. F. S., Hubertsville, Tenn. Your mule suffers from a partial luxation of the patella. Treatment and nature of trouble have been given in answers to similar questions in recent numbers of this paper. Consult them.

Anchylolysis.—C. M. C., describes a case of anchylolysis in the hoof-joint, caused by a wound that took a long time to heal.

ANSWER:—Anchylolysis, whenever produced in a joint, may be set down as incurable. It probably could have been prevented by a proper treatment of the wound, while yet fresh, but that is too late now.

Bots.—D. W. B., Haddysville, Oregon, wants to know what will cure bots. Bots are the larvae of the bot-fly, *Gastrophilus* equi, and once securely lodged in the stomach, nothing, it seems, will incommode them. Hence, there is no cure. The prevention consists in keeping the horses stabled while the fly is swarming, or else in destroying the eggs of the fly as soon as deposited.

Wants Instruments.—H. B., Manannah, Minn., asks: "Where can I get a case of horse-dentist tools?"

ANSWER:—If you have use for such instruments, which I very much doubt, you will have to apply to a dealer in surgical instruments. The most practical instruments of that kind I know of are made by Hauptner, in Berlin, and can be procured through H. Braun, Sons & Co., Columbus, Ohio.

A Spoiled Bag.—J. B., Wistor, Pa. The induration in one quarter of your cow's bag cannot be removed; leave it alone and allow it to become perfectly dry. The milk of the other three quarters is just as good as it would be if one quarter were not spoiled, and the quantity produced will be nearly equal to what was formerly produced by all four quarters. If you wean the calf you must not neglect frequent milking.

A Fistula.—R. J. T., McArthur, Ohio, gives a description of a fistula situated at the joint of the hip. A fistula can be formed in almost any part of the body, consequently on the hip as well as somewhere else. The best advice I can give you is to lose no time, but to employ at once a good veterinarian and entrust him with the treatment, because if you do, a healing will much sooner be effected, and at less expense, if everything is counted, than if you undertake the treatment yourself. If you desire further information about the treatment of fistules, I refer you to a recent number of this paper.

Cris in the Jawbone.—L. F. K., Middletown, Md., writes: "I have a very valuable horse that has a large lump under its jaw, which followed the quinsy. It is of three months' standing or more. I opened it recently and found the jawbone decaying and have taken out quite a number of small pieces of bone. It is swollen badly and the trouble extends over a large portion of the right jaw. I am syringing it with diluted carbolic acid. Is my treatment right?"

ANSWER:—The best you can do, especially as your horse is a valuable one, is to entrust the treatment to a competent veterinarian. By doing so, you not only will save time and money, but probably also your horse, unless it be that the latter is already past recovery.

HOME STUDY. BOOK-KEEPING, BUSINESS FORMS, Penmanship, Arithmetic, Short-hand, etc., thoroughly taught by MAIL. Circulars free. Bryant & Stratton's, 419 Main St., Buffalo, N. Y.

5 NOVELS FOR 10 CENTS. NEW ONES JUST OUT. Novelette Pub. Co., Mechanic Falls, Maine.

Chronic Discharges From the Vagina.—J. H. S. The discharges may be due to a chronic catarrhal condition of the uterus, but also to old age; probably to both. If the mare is not older than you state she is (eighteen years), you may try injection with astringent decoctions (of oak bark, etc.) and give the animal good, nutritious food, easy of digestion.

Scalded With Hot Water.—W. K. C., Stewart's Point, Cal., writes: "I have a valuable collic, one year old, that got scalded with boiling water, and the hair is all coming off of his side. I would like to know the best treatment for it."

ANSWER:—Nothing can be done to make the hair grow where the roots have been destroyed. A very good and simple treatment for scalds and burns consists in frequently-repeated applications of a mixture of equal parts of lime water and sweet oil; but it is too late now, in your case, for this treatment.

Farcy.—F. D. C., Hesperia, Mich., writes: "I have a mare that had the farcy two years ago. There is a small sore where it broke. It has been kept open. She does not keep as easy and in as good order as she did before. Would she do to breed again? Can she be cured?"

ANSWER:—If your mare had farcy, she undoubtedly has it yet, and you ought to at once inform your state veterinarian. But perhaps you are mistaken; therefore, the best you can do is to have the mare examined by a reliable veterinarian, at any rate before you breed her. Farcy is nothing but external glanders, and just as dangerous as the latter, and for obvious reasons even more infectious.

Damaged Teat.—H. H., writes: "I have a cow that got her teat split by barbed wire. It has healed, but the opening lets the milk out. Is there any remedy?"

ANSWER:—The muscular fibers which constitute the sphincter of the opening of the teat, must have been severed, and have failed to unite. If such is the case, there is no remedy. It is possible to temporarily prevent the milk from flowing out by a judicious application of a rubber band; but that must not be too often repeated, nor must it be allowed to be kept there too long at a time.

Strain in the Flexor Tendons.—F. S., Cambridge, N. Y., describes a case of an old strain in the flexor tendons of the fore leg, which has not terminated in perfect recovery, in so far as some enlargement of the tendons has been left behind, and asks for instructions.

ANSWER:—It is not safe to use the horse in question on the race track, or for great speed, at least not until every trace of tenderness in the affected tendons has disappeared. It is, moreover, of importance to prevent a "smart" blacksmith from cutting away too much of the heels, or quarters, when shoeing the horse, because by doing so more weight is thrown upon the weakened tendons. He may pare the toes, but not the heels. Lowering, that is, paring the toes, will throw more weight upon the bones, and thus relieve the tendons. I cannot give any more definite advice without examining the animal.

Obstruction in the Respiratory Passages.—W. H. D., Red Lion, O., writes: "My horse has been afflicted for two or three years with coughing and running at the nose, the result of epizootic. Otherwise his general health appears to be good. His appetite is good, and he seems to feel lively. But when driving him he sometimes becomes suddenly affected with violent shaking of the head, dodging as though some one were striking at him, laying back his ears, and once or twice he has become cramped all over. When I noticed him in this condition I would stop, and after standing a few moments the trouble seemed to disappear and he was all right."

ANSWER:—Your horse, according to your description, seems to have a somewhat movable obstruction in the respiratory passages, but what the nature of the obstruction is and where it is situated, can be ascertained only by a careful examination of the animal. I therefore have to advise you to have the horse examined by a competent veterinarian.

Can be applied by any one on steep or flat roofs.

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If you are going to build or have leaky shingle or tin roofs send for sample and circular.

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If you want a firm **Fixed Tower** made of **Strong, Stiff Steel**, and a **Wheel** that will cost you less than wood, and last ten times as long, IF YOU WANT THE TOWER SOU BUILT HAVE TO CLIMB THE TOWER) AND THE WHEEL THAT RUNS WHEN ALL OTHERS STAND STILL, or, if you want a wheel that will churn, grind, cut feed, pump water, turn grind stone and saw wood, A. E. A GRATED ARCH MOTER THAT WILL DO THE WORK OF FOUR HORSES AT THE COST OF ONE (\$100) write for copiously illustrated printed matter showing every conceivable phase of windmill construction and work, to the **AERMOTOR CO.**, 106 W. W. St., Chicago, Ill., U. S. A. or Branch, 12 Main St., San Francisco, Cal., U. S. A.

FOR \$60 and freight we erect on a 40 FT. STEEL TOWER a 12 FT. WOODEN ONE. Steel Wheel that equals any 12 ft. wooden one. GREAT REDUCTION TO FIRST PURCHASER.

Our Miscellany.

LOVE'S SILENCE.

Of all the words that bear their part
In all the deeds from day to day,
One word is chiefly in my heart,
One little word I must not say.

The hills of truth are straight and deep,
They have a smart in every stone,
And climbing them I needs must weep
To think that love must die unknown.

Night follows day—day chases night,
And brings a lesson strange to teach,
That love is lifeless in the light
And silence in the fullest speech.

—Walter Herries Pollock.

AN expert electrician insists that an electric train, making 125 miles an hour, would require 7,000 feet in which to come to a standstill.

DR. WILEY is credited with having discovered a method whereby the production of sugar from sorghum can be doubled. This is important.

THE reader for a New York magazine says that as a result of nine weeks' reading he accepted just 23 out of 1,227 poems offered that magazine for publication.

AN extraordinarily large polar bear, the fur of which is a bright pink color, has been captured in Northern Siberia. The animal will be sent as a present to the Czar.

JOTHAM WINROW, in the *American Grange Bulletin*, says: "The average American farmer is not an ignoramus, he is not uncivilized, he is not a fool, a swindler nor a failure."

PROF. ATWATER says: "I have traced the roots of timothy to a depth of two feet four inches, and the clover three feet and two inches in a hard clay soil, suitable for making brick."

SUPERFLUOUS Hair permanently removed without pain or even redness of the skin by the new discovery, Pomade Dissolvent. \$1.00 per box. Address Anti-Freckle Lotion Co., Springfield, Ohio.

It is reported that several years since a gardener discovered that by planting his squash seeds in earth that had a layer of coal ashes above and below it, the vines were not molested by cutworms.

A PRESIDENTIAL candidate whose name ends in "n," who has a man with a name ending with the same letter on the ticket with him for vice-president, always has won. There have been over half a dozen of these combinations, and all have been successful.

FOUR different mountain peaks in Idaho are from 13 to 23 feet lower, by actual measurement, than they were 15 years ago, and it is believed that this settling is going on with many others. The idea is that quicksands have undermined them.

THE annual report of George West, state viticultural commissioner for the San Joaquin district, California, has been received. From it we learn that since 1873, when the production of raisins in that state was 6,000 twenty-pound boxes, the production has risen to 2,040,000 boxes in 1890.

BEECHAM'S PILLS cure Sick-Headache.

BET sugar is made in Germany and France at the low cost of 1.5 cent per pound. According to the *Sugar Beet*, the annual consumption of sugar in this country is about 57 pounds per capita; it was only 43.37 in 1875, so the increase has been 13.6 pounds, representing 7.6 pounds annually more than Great Britain consumed during the same interval.

IT IS SO EASY to CONTRACT A COLD, which from its obstinacy, may entail a long siege of discomforts before getting rid of it, that the afflicted should resort at once to that old established remedy Dr. D. Jayne's Expectorant, which will speedily remove all Coughs and Colds and help you to avoid all complications, involving the Throat and Lungs.

IN Georgia there is a tree on the mountain, above the large cliff of marble on the line of the Marietta and North Georgia railroad, that has been burning for five months, and is still burning. The whole mass is red hot, and the material when taken out is very much like chop cluder, but after being exposed for a few hours it slacks like lime. It is very strong with alkali and smells like sulphur.

WE will mail free to any address, a copy of our Home Treatment, a positive cure for Leucorrhea, Whites and all Female Weakness. Send self-addressed, stamped envelope. May Flower Med. Co., 85 Lake St., Chicago.

THE heaviest rail in use in America is the 110-pound rail of Chignecto ship railway, while the heaviest rail in use in the United States is the 90-pound rail of the Philadelphia & Reading. The latter is to be surpassed by a new 95-pound rail which is being rolled for the Boston & Albany. The metal in the rail is distributed so that about 42 per cent is in the head, 19 per cent in the web, and 39 per cent in the flange.

Female Weakness Positive Cure. Free.

I have a positive remedy for the thousand and one ills which arise from deranged female organs. I will send two bottles of my remedy, FREE to any lady, if they will send their Express and P. O. address. Yours truly,

Dr. J. B. MARCHISI, UTICA, N. Y.

PROBABLY the smallest salary paid in the world is that paid to the village watchman of Springstille, in Hessen. The amount of his daily income is 4 pfennings, or less than 1 cent in our money. This is the same amount that was paid to the village watchman in the last century. However, the "fortunate" man received an additional allowance of 30 cents a month for clothing, etc., and is entitled to free board and lodging from the inhabitants of the village.

BLACK BEAUTY.

There is the spice of novelty about such a book as "Black Beauty," since it may be said to be the first time when a horse has intelligently told the story of what is inflicted upon it by the human race. It is, in truth, the autobiography of a horse, and one can easily understand, after reading it, why over one hundred thousand copies have already been sold of the book. Few works ever published with larger pretensions have so effectively told the great lesson of humanity as does this book. Several masters, at different times, owned "Black Beauty," and the story of their treatment is told by the horse. The entire horse kingdom seems to speak through these pages, and better than all the books on "How to Drive Well," or "How to Manage a Horse," is this excellent and humane story. Women like Mrs. President Harrison, Mrs. Vanderbilt and Mrs. Henry Ward Beecher have each bought a large number of copies of the book for distribution among cab and car drivers, and a better piece of charitable work could not be done. Whether you own a horse or not, you should read this book, if only for the lesson which it teaches to everyone. A movement has been recently started to erect a simple memorial in honor of Miss Sewell, the author of the book, in order that her work in behalf of the horse may not be speedily forgotten. It is said that its author did not enjoy the fame the book has won for her, since she died soon after its publication.—*D. Lothrop Company.*

See our liberal offer of this wonderful book, on the supplement leaf with this issue.

HOW THREAD IS NUMBERED.

The seamstress, whether she wants No. 30 or 40, or 120 thread, knows from the number just what kind of sewing it can be used for. When 840 yards of yarn weigh 7,000 grains, a pound of cotton, the threadmakers mark it No. 1. If 1,680 yards weigh a pound, it is marked No. 2. For No. 50 yarn it would take 50 multiplied by 489 to weigh a pound. This is the whole explanation of the yard measurement as used by the spool cotton manufacturer.

The early manufactured thread was of three-cord, the number being derived from the number of yards to the pound, just as it is today. No. 60 yarn made No. 60 thread, though in point of fact the actual calibre of No. 60 thread would equal No. 20 yarn, being made of three No. 20 strands twisted together.

When the sewing machine came into the market as a great thread consumer, unreasoning in its work and inexorable in its demands for mechanical accuracy, six-cord cotton had to be made in place of the old and rougher three-cord, it being much smoother. As thread numbers were already established, they were not altered for the new article, and No. 60 six-cord and No. 60 three-cord were left identical in both size and number.

To effect this the six-cord had to be made of yarn twice as fine as that demanded in making the three-cord variety. The No. 60 cord is made of six strands of No. 120 yarn. The three-cord spool cotton is of the same number as the yarn is made of.

Six-cord spool cotton is always made from double its number. Thread is a simple thing, but simple as it is, there are 2,000 kinds of it, and each kind goes through hundreds of different processes.—*Dry Goods Review.*

WHAT SECRET SOCIETIES ARE DOING.

The amount of money paid to widows and orphans by the benevolent fraternal societies during the last twenty years, is approximately as follows:

| | |
|--------------------------------------|-------------|
| Ancient Order of United Workmen..... | \$2,800,000 |
| Knights of Honor..... | 32,500,000 |
| Royal Arcanum..... | 16,000,000 |
| American Legion of Honor..... | 17,000,000 |
| Knights and Ladies of Honor..... | 16,000,000 |
| Other fraternities..... | 35,000,000 |

Total of all orders.....\$149,300,000
This estimate is too small rather than too large. It includes the payment made for sick benefits, which probably amount to \$10,000,000, as well as those made by the Masonic and Odd Fellow fraternities. The present membership of the benevolent beneficiary orders in the United States and Canada is probably not far from 1,250,000, and they are paying out on death claims not less than \$2,000,000 per month, or \$24,000,000 annually. The aggregate amount of certificates outstanding is about \$2,500,000,000. This prodigious sum will be paid within the next fifty years.—*Overseer.*

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 820 Powers' Block, Rochester, N. Y.

Of the 30,546 white convicts registered in the various penitentiaries of the country, 23,094 are among native born and 7,667 foreign born. Of these native born prisoners, 12,842 had both parents native, 6,584 had both parents foreign born, 1,747 had one parent native and one foreign born, and in 1,921 cases the birthplace of one or both parents is unknown. Special Agent Wines sums up his report for the census of 1890 by saying that "the foreign population of this country contributes, directly or indirectly, in the persons of the foreign born or of their immediate descendants, considerably more material for our state prisons and penitentiaries than the entire native population."

GOOD WORDS.

SALEM, N. H., March 12, 1891.

We feel it a duty we owe you to acknowledge the receipt of the Peerless Atlas. It is certainly beyond our comprehension how you can send to your subscribers so much value—real, intrinsic value—for the money you receive. The Atlas is worth ten times more than the amount we sent you. The maps are perfect in outline, artistic in design, and a marvel of the printer's art, while the statistical facts are a whole encyclopedia in themselves. Wife is more than pleased with the LADIES HOME COMPANION, and the FARM AND FIRESIDE is a welcome visitor. We wonder why so many people will throw away their money on cheap papers when they can really be paid for reading these bright, interesting publications. We say *be paid for reading them*, for when we consider the value each subscriber receives in premiums, the papers actually cost nothing. Yours very truly,

MR. AND MRS. S. K. ABBOTT.

PHILADELPHIA, PA., March 19, 1891.

I thank you very much for the Cook Book. I like it. The recipes are very good.

MRS. FREESTON.

PROSSER, NEB., April 9, 1891.

I received the picture, "Christ on Calvary," and I am very well pleased with it. I think it just splendid.

C. F. LANPHEAR.

GREAT BEND, KAN., March 20, 1891.

I received the Peerless Atlas all right, and I am very much pleased with it. It is very useful and instructive.

JAS. IVINS.

LAWRENCE, MASS., March 23, 1891.

I received the following all in good order: Stamping Outfit, Black Beauty, Cook Book, "Christ Before Pilate," "Christ on Calvary" and Peerless Atlas, for which I return you my sincere thanks. My family is highly pleased with them, especially with the Peerless Atlas. It ought to be in every family.

WM. WILKINSON.

FLAT ROCK, ILL., April 8, 1891.

I have one of Moody's Systems of Square Measurement, and have studied it, and will say that I am well pleased with it. I am cutting dresses right along by it, and have had no trouble. It is a new thing here, and I have recommended it very highly to a great many. Several have asked me to procure it for them.

MRS. LAURA RICHARDSON.

HOPLAND, CAL., March 23, 1891.

I received the High-arm Singer Sewing Machine sent me, and I am delighted with it. I don't think you have ever sent out a machine that gave more publicity to your publications, for I received it right in the midst of a big crowd, and told them just how I obtained it and how much the costs were to have it sent here to California, which was \$4.95.

CHRIS. LORETZ.

GALVESTON, TEXAS, March 27, 1891.

I received your Dictionary and Cook Book, and find them to be the most useful books in the household circle. I would not part with them.

MRS. C. C. HASLER.

ASHTABULA, O., March 23, 1891.

I received the Atlas, Cook Book and Needles all in good condition, and am highly pleased with each, the Atlas being worth much more than the cost of all.

KITTIE B. WILLIAMS.

CHAMPION, OHIO, March 20, 1891.

I received the Cook Book in good shape. Am much obliged. Think it a very good book, much better than I expected. Would not part with it for twice what it cost.

MISS MARY COX.

PECK'S RUN, W. VA., March 25, 1891.

The Sewing Machine was received in good order. The machine is everything you claim for it. It runs light, makes a beautiful stitch; in fact, does all its work well.

E. E. TUTT.

SCOTT, N. Y., March 15, 1891.

The Peerless Atlas arrived all right. I am more than pleased with it. It is the most complete work of the kind I ever saw, and the grandest premium I ever saw offered by any publisher. I would not part with it for several times the amount it cost me.

MRS. H. C. BABCOCK.

GREER, PA., March 22, 1891.

I received the picture, "Christ Before Pilate," in good order, and would not part with it. Please accept many thanks.

CHRYST O. DONNELL.

MENOMINEE, MICH., March 26, 1891.

The Sewing Machine ordered of you was received in good order. I am well pleased with it. It does just as good work as machines that agents here ask forty or fifty dollars for. Please accept my thanks for same, and also for the

prompt manner in which you have dealt with me.

MRS. ETTIE LOW.

ALPENA, MICH., March 28, 1891.

I received the Atlas, and I am very well satisfied with it. I think it extra good for the money. I find lots of very valuable information, and I should not like to be without it now.

M. L. OLIVER.

TENAHIA, TEXAS, March 25, 1891.

I received the High-arm Sewing Machine in good order, and am pleased with it. As far as tried, I don't see very much difference between it and a \$45 machine.

J. B. WOODFIN.

FAIRVIEW, OHIO, April 3, 1891.

The Cook Book was received, and I am well pleased with it. I have tried several of the recipes and like them very much. I do not think I could well do without it now.

NETTIE A. BERRY.

KENNEDY, N. Y., April 1, 1891.

I received the Atlas all right. It is the best one I ever saw of the kind. I can find anything I want in it, and I like it very much.

LEANUT SAFFORD.

PIERSON, IOWA.

I received my Sewing Machine in good order. I have tried it and find it to be just as recommended. It sews all right, and is just as fine-looking as machines sold here for forty and fifty dollars. Many thanks.

MARY BARE.

MIDDLEBORO, MASS., March 23, 1891.

I received the Cook Book and Atlas all right, and am very much pleased with them. I think everything of the Atlas, and show it to all of my friends.

J. E. McMANN.

MARCH, SOUTH DAK., March 18, 1891.

I received the Atlas, and it is splendid. I consider it worth ten times what it cost me, and all that I have shown it to say it is ahead of anything of its kind. Accept my thanks.

EDITH A. THOMPSON.

FARMERS Wyandotte Eggs \$1.00 per 13.

Geo. E. Howell, Howell's Depot, N. Y.

Agents Wanted FOR THE LIFE OF P. T. Barnum

Written by himself. Just published. Big Money if you STRIKE AT ONCE. Outfit 25 Cents. Callahan & Connelly, 404 Main St., Buffalo, N. Y.

WANTED! A LADY

To send out circulars, manage pleasant, steady homework, 1 to 8 hours daily. Good pay. Send 10c. (silver) for book teaching our New Art, with terms. SYLVAN CO., Box N, Port Huron, Mich.

WOMAN'S WORK.

I can pay a salary of \$5 a week and increase it, for ladies to open letters at their homes and assist me in a quiet and agreeable way among friends. Nice little sum of money made by a few hours work each day. References given. I can give pleasant employment to a few ladies. Address with stamp, Mrs. Maria Walker, 514 Fourth Avenue, Louisville, Ky.

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KOOT BEER
THE GREAT HEALTH DRINK.
Package makes 6 gallons. Delicious, sparkling, and appetizing. Sold by all dealers. FREE a beautiful Picture Book and cards sent to any one addressing C. E. HIRES & CO., Philadelphia.



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Before you buy a Press, write the HYDRAULIC PRESS MFG. CO. of Mt. Gilead, O., for catalogue, which will be mailed free on application.

HYDRAULIC


Presses for all purposes; also general cider makers' supplies.



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Conklin's Handy Manual of Useful Information and World's Atlas contains the cream of a whole library; a marvel of completeness. Edition of 1891 contains complete official census of 1890, population of every State and Territory, also of all cities of 6000 or over in 1890, 1880 and 1870, the McKinley Bill, new Copyright Law, Appropriations of Congress, complete political information, valuable points of law for every day use, best records to date in all kinds of reports, besides information on 2000 subjects of value to everyone. The volume has 50 full-page maps in colors, with a description of every country in the world. Over 1,500,000 copies sold.

1891 selling like wild-fire. Agents making \$5 to \$15 a day. Send 25c. for agent's terms and copy bound in limp cloth or 50c. for copy in Library style. LAIRD & LEE, 203 Wabash Ave., CHICAGO, ILL.



\$750 IN CASH

If You Solve This Rebus!



Mess. CANWELL & COMPANY, Publishers of The Household Companion will give \$300 Cash to the 1st person sending a correct solution to the above Rebus. To the 2d, \$150; to the 3d, \$100; to the 4th, \$75; to the 5th, \$50; to the 6th, a first-class Safety Bicycle, or if a lady an elegant Diamond Ring. To each of the next 10, a SOLID GOLD WATCH. To the next 15, 25 a Nickel or Gold-Plated Watch; to each of the next 50 a Solid Gold Diamond Ring; to each of the next 15, Five Dollars in Cash; to each of the next 100 a choice House or Business Lot. Answers must reach us on or before July 10, 1891. With your answer send 25c. postal note or 30c. in stamps for a subscription to our Illustrated 16pp. Paper, worth a dollar a year. Our July issue will announce the result of the contest, with names and addresses of the winners. We have given away over \$20,000 in prizes and premiums to our subscribers in the past two years and now have over 100,000 Circulation. Write your answer and name and address plainly, and enclose subscription money to

CANWELL & COMPANY,

41 & 43 Beekman St., New York City.

Smiles.

A BOSTON MAIDEN.

A Boston girl is so high-toned,
So modest and refined,
She always has to be alone
Before she'll change her mind.
'Tis said at speech she's always miffed,
Which naked truth displays,
She'd faint away, if winds should shift,
Before her startled gaze.

If undressed linen she would buy,
Her want she'd thus disclose:
"I'd like some linen"—here she'd sigh—
"That hasn't yet arose."

The winter does her soul displease,
And fills her with despair,
She can't endure to see the trees
When all their limbs are bare.

'Tis strange as some poetic myth
How e'er this maiden can
Go on a wedding tour with
A rude and awful man.

HE GOT UP.

Is there a man in all this audience," fiercely
exclaimed a female lecturer, "that has
ever done anything to lighten the burden
resting on his wife's shoulders? What do
you know of woman's work?"

"Is there a man here," she continued,
folding her arms and looking over her audience
with superb scorn, "that has ever got up in
the morning, leaving his tired, worn-out wife
enjoy her slumbers, gone quietly down stairs,
made the fire, cooked his own breakfast,
sewed the missing buttons on the children's
clothes, darned the family stockings, scoured
the pots and kettles, cleaned and filled the
lamps, swept the kitchen, and done all this if
necessary, day after day uncomplainingly? If
there is such a man in this audience, let
him rise up! I should like to see him!"

And in the rear of the hall a mild-looking
man in spectacles, in obedience to the sum-
mons, timidly arose. He was the husband of
the eloquent speaker. It was the first time he
had ever had a chance to assert himself.—
Exchange.

A TALENTED SALESMAN.

Fair customer—"Is this real antique?"
Furniture dealer—"A—er—modern revival
and—er—evolution of an ancient court style,
madam."

Fair customer (doubtfully)—"What kind of
wood is it?"

Dealer (impressively)—"Wood? Madam, this
is the wood that poets have raved over when
alluding to the music of nature—it is the wood
that first greeted the eyes of the weary Pil-
grims at Plymouth Rock, as the mighty trees,
rich in verdure, bent beneath the snow; it is
the wood that even now attracts invalids to
the forests where it grows. It is pine, madam,
genuine pine."—*New York Weekly.*

THE SUPERIORITY OF MAN.

Jack—"I don't see why you girls shouldn't
hustle around like the rest of us and do things
for yourselves. You could make lots of
money by making your own hats and gowns."

Laura—"I'd just like to know what you do
for yourself."

Jack—"I? Why, I've been making my own
cigarettes ever since the first of January."—
Life.

HER CUSTOM.

Mrs. Prentice—"How do you always manage
to have such delicious beef?"

Mrs. Binthyre—"I select a good, honest
butcher and then stand by him."

Mrs. Prentice—"You mean that you give
him all your trade?"

Mrs. Binthyre—"No, I mean that I stand by
him while he is cutting off the meat."

A REFRESHING INSTANCE.

Janet—"Oh, Geraldine, just think how we
have underrated Mr. Thorley! Why, it seems
he's been all over Europe, India, China, Japan
and Australia."

Geraldine—"Anything remarkable about
that?"

Janet—"Yes. He's never talked any place to
us but Brownsville."

A LIGHT THAT FAILED.

Morton—"Benson is a great painter. Have
you seen his 'Study in Nature?'"

Holcombe—"No."

Morton—"Well, I tell you, there are no flies
on it."

Holcombe—"What does it represent, a spi-
der's web or a baby eating jam?"

HE KNEW WHICH WAY THEY RAN.

Pat—"Yez may say wot yez plaze, gintlemen;
it's not anywhere ye'll be foindin' braver men
nor th' Irish."

Banter—"Come off, Pat; it was only the
other night that I made five of them run."

Pat—"Was it long catchin' ye, they were?"—
Life.

HAVE YOU CATARRH?

There is one remedy you can try without
danger of Humbug. Send to H. G. Colman,
Chemist, Kalamazoo, Mich., for trial package
of his Catarrh Cure. His only mode of adver-
tising is by giving it away. Postage 4 cents.
Judge for yourself. Mention this paper.

DUTCH ENGLISH.

A German in Chicago, who has not paid
much attention to learning English, had a
horse stolen from his barn the other night,
whereupon he advertised as follows:

"Von nite, de oder day, ven I was bin awake
in my shleep, I heare sometings vat I tinks
vas not just right in my barn, and I out
shumps to bed and runs mit the barn out; and
ven I was dere coom I sees dat my pig gray
iron mare he vas bin tide loose and run mit
the staple off; and whoefer will him back
pring, I yust so much pay him as vas bin
kushtomary."

UNSUCCESSFUL.

Cholly—"What's—aw—the mattah—aw—
with Sissy Downy? He—aw—looks vewy
much dejected, y' know."

Gussie—"Ya-as; Sissy, don't y' know, ap-
plied for membership in Sorosis, deah boy,
but they actually wouldn't have him, y' know.
Said he was too effeminate, bai Jove."

A SUCCESSFUL PRESCRIPTION.

"Well, Madam, did the prescription which I
ordered for your husband do its work?" asked
the doctor.

"A perfect success, doctor. I have not had
the slightest difficulty with the life insurance
company."—*Paris Figaro.*

HE WAS NOT SURPRISED.

Nurse—"Tommy, this is your new sister."
Tommy—"Where did she come from?"

Nurse—"From heaven."

Tommy—"In deep disgust"—"I don't wonder
they wanted to get rid of her."—*Texas Siftings.*

OUR ENGLISH COOK.

"Now, ma'am, 'ow will you have the duck
to-day? Will you heat it cold, or shall I eat
it for you?"

LITTLE BITS.

Widow Casey—"Ah, Mr. Dolan, when my
ould man died it left a big hole in my heart."

Mr. Dolan—"Mrs. Casey, would ye moind
patchin' it wid a bit out of mine."

Nurse (to young husband)—"A beautiful
ten-pound baby, sir."

Young Husband (getting things mixed in
his excitement)—"Glorious! Am I a father or
a mother?"

He—"Tell me what you think of my last
poem. I want to finish it, as I have other
irons in the fire."

She—"I should withdraw the irons and in-
sert the poem."

"Must be pootty hard times east, too," said a
Kausas man who was being shown a fashion-
able ball at the academy the other night. He
was asked why. "Because two deservin'-
lookin' wimmin jist went by me that didn't
have much more'n enough to their backs to
flag a haud-car with."—*Philadelphia Record.*

Stranger (visiting city)—"Say, mister, what's
that big stone building? An orphan asylum?"

Citizen—"Why, no; that's the office of the
daily and weekly *Givemits*, just erected with
accumulated dividends."

Stranger—"Gosh all fish-hooks! The deuce
you say! Why, I got mad at the editor and
stopped that paper more'n five years ago, and
supposed, of course, the consarn had busted
and quit."—*Printer's Ink.*

"Was your elopement a success?"

"Hardly."

"What went wrong?"

"Her father telegraphed us not to return and
all would be forgiven."—*Harper's Bazar.*

"Clara," said Nellie, according to the Boston
Herald, dropping the fashion paper she was
reading, "what would you do if you had a
mustache on your lip?"

"After he took it away I should tell him
that I preferred to be married in June."

The recent death of Gen. William Tecumseh
Sherman has started considerable discussion
as to his birthplace. Many claim he was born
in New England, but the fact is he was born
Feb. 8th, 1820, at Lancaster, Ohio.

\$620 in GOLD

Given in Premiums ARE YOU IN IT?

To the first person telling us before June 15th,
next, the correct birthplace of the late Gen. Wm.
Tecumseh Sherman we will give \$50.00 in gold; to
the second \$25.00; to the third \$10.00; to the next
twenty-five \$5.00 each, and to the next hundred
\$1.00 each. To the person sending the last correct
answer we will give \$50.00 in gold; to the second
last \$25.00; to the third last \$10.00; to the next
twenty-five, counting backwards, \$5.00 each, and
to the next hundred \$1.00 each. With your answer
send 30 cent postal note or silver for a box of

Reid's Electric Remedy

remedy for immediate cure of head aches ever dis-
covered. Remember the cash presents are sent
absolutely free, and are given away to advertise
this great cure. Thousands suffer torture from
headache that would be cured in ten minutes by
Reid's Electric Remedy. For 30 cents
we send enough for eight doses. Read the follow-
ing from Mrs. Martha W. Hancock, Morgans Mill,
Erath Co., Texas. "One dose of your Reid's
Electric Remedy gave me instant relief and
complete cure in ten minutes. Have been a great
sufferer from headache for twenty-five years and
your electric remedy is the only thing that ever
cured it." We have many letters similar to above
all showing that Reid's Electric Remedy is the
most marvellous cure for sick, nervous or bilious
headache ever produced. AGENTS WANTED
On June 20th we shall announce the list of persons
to whom we have paid the gold premiums. Send
30 cents at once for Reid's Electric Remedy and
secure the gold offered. Address the selling agents
J. BRIDE & CO., 122 Nassau St., New York

WE SELL DIRECT TO FAMILIES

And make it easy for you to buy of us no matter where you live.

\$35
ORGANS
\$500

\$180
PIANOS
\$1500

Yes, my dear, your Mar-
chal & Smith Piano is a beau-
tiful instrument; the tone is
so sweet and pure, the action
so fairy-like, and the finish
so elegant that nothing is
left to wish for. Their
Organs, too, are as sweet and
beautiful as their Pianos.

I wrote and told them just
what I wanted, and they sent
it to me, agreeing to take it
back and pay the freight both
ways if I did not like it, but
I could not be better pleased
if I had a thousand to choose
from. They send their cata-
logue free to every one who
wishes to buy.



MARCHAL & SMITH PIANO CO.,
235 East 21st Street, New York.

A FLORAL TREAT ALL FOR 3 STAMPS.

1 copy Park's New Illus. Floral Guide—All About Flowers...10c.
Sample Park's Floral Magazine—a charming monthly...5c.
1 pkge. Choice Mixed Flower Seeds (nearly 1,000 sorts)...15c.
1 Conditional Certificate or Order for Seeds, your choice...25c.
All of the above for only three 2-cent stamps.

This is our best offer and the last one of the season. It will not
appear again. You'll miss a floral treat if you neglect it. Write at
once. Tell your friends. GEO. W. PARK, Libonia, Pa.

P.S.—Park's "All About Roses" 10c. 13 splendid ever-blooming Roses \$1. or 10 Roses and Magazine 1 yr. \$1.

HARTSHORN'S SELF-ACTING SHADE-ROLLERS.

Beware of Imitations.
NOTICE
AUGUST 1900
OF
HARTSHORN'S LABEL
AND GET
THE GENUINE
HARTSHORN

The Pittsburgh Lamp

is one of those inven-
tions that seems to be
finished. It seems to
reach the end as to
goodness of light
in every way,
and ease of
management.
The only care
it requires is
filling and wip-
ing.

Dirt falls out when the chimney
is taken off, not into a pocket as
in other central-draught lamps.

Putting in a new wick is a very
easy matter indeed.

All this seems strange to one
who knows how troublesome other
good lamps are.

It is in all the good lamp-stores.
Send for a primer.

Pittsburgh, Pa. PITTSBURGH BRASS CO.

WALL PAPER

Best quality, without gold, 4c. to 5c. per roll.
Gold paper, 8c. to 10c. "
Finest Embossed paper, 15c. to 30c. "
Samples sent to any part of the U. S. on receipt of
10c. postage. COMO PAPER CO., 57 Plymouth Place, Chicago

DONALD KENNEDY

Of Roxbury, Mass., says

Kennedy's Medical Discovery
cures Horrid Old Sores, Deep
Seated Ulcers of 40 years
standing, Inward Tumors, and
every disease of the skin, ex-
cept Thunder Humor, and
Cancer that has taken root.
Price \$1.50. Sold by every
Druggist in the U. S. and
Canada.

Always mention this paper when answer-
ing advertisements, as advertisers often
have different articles advertised in several
papers.

FREE TO BOYS AND GIRLS UNDER 18

WITHOUT ONE CENT OF MONEY.

If any boy or girl under 18 years of age wants a strictly first-class safety bicycle they can
obtain it free, without one cent of money. We shall give away, on very easy conditions,
1000 or more. The wheels are 25 inches, with crescent steel rims and molded rubber tires,
and run on hardened steel cone bearings, adjustable to wear; geared to 46 inches; detach-
able cranks; four to five inches throw; frame finely enameled, with nickel trimmings.
Each machine is supplied with too bag, wrench and oiler. Equal in quality to those sold
on the market for \$45.00. We have both boys' and girls' styles. If you want one write a
note to WESTERN PEARL CO., 308 Dearborn St., Chicago, Ill. Mention this paper.

MUSIC BOXES.

If you want to buy a Swiss
Music Box, write for descrip-
tive circular, Free, of the
SYMPHONION.
It is entirely new and novel
in construction and opera-
tion, plays
1000 TUNES.

A large and constantly increasing list of tunes to select from.
FRED H. SANDER, Importer, 102 High St., Boston, Mass.
Always mention this paper.

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A Magnificent Collection of FLOWER SEEDS

200 Varieties, FREE!

An Unparalleled Offer by
an Old-Established and
Reliable Publishing
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is a mammoth 16-page, 64-col-
umn illustrated paper for ladies,
devoted to stories, poems, ladies'
fancy work, artistic needlework,
home decoration, housekeeping,
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ing, etiquette, etc. To intro-
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into 100,000 homes where it is not
already taken, we now make the fol-
lowing colossal offer: Upon receipt
of only 12 Cents in silver or stamps, we will send
The Ladies' World for Three Months, and to
each subscriber we will also send Free and post paid, a large
and magnificent Collection of Choice Flower Seeds, two
hundred varieties, including Pansies, Verbenas, Chrysanth-
emums, Phlox, Dandelion, Balsam, Cypress Vine,
Digitalis, Double Zinnia, Pinka, etc., etc. Remember, twelve
cents pays for the paper three months and this entire magnifi-
cent Collection of Choice Flower Seeds, put up by a first-class
Seed House and warranted fresh and reliable. No lady can
afford to miss this wonderful opportunity. We guarantee every
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your money and make you a present
of both seeds and paper if you are not
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publishing house, endorsed by all lead-
ing newspapers. Do not confound this
offer with the catchpenny schemes of
unscrupulous persons. Write to-day—
don't put it off! Six subscriptions and
six Seed Collections sent for 60 cts.

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swering this ad-
vertisement and naming the paper in which
she saw it, we will send free, in addition to
all the above, one package of the new and
popular imported "Tropaeolum Lobbianum"
(assorted), containing "Laciniatum," "Spitfire,"
"Venus," and other luminous of high degree
bright and highly colored. An abundant bloomer and
easily cultivated. A beautiful climbing flower for vases, hanging
baskets, old stumps, etc., most glorious to effect. Address:
S. H. MOORE & CO., 27 Park Place, New York.

Mention this paper when you write.

WATCH WHEN THE DOG COMES OUT.

This Weather Warning will faithfully forecast the weather for
the ensuing 24 hours, so that you can get your own weather
report without waiting for the newspapers to tell you what the
weather report is to be. It is a cyclone warning. When the
weather is going to be wet, a fine noble dog arises from his
kennel back in the distance, and approaches the opening (see
illustration above), giving a signal that there is a storm ap-
proaching, and as the storm subsides, or if it will be over dur-
ing the next 24 hours, a butterfly in all its splendor appears to
tell you that sunshine is at hand, to gladden the hearts of man-
kind. The butterfly and the dog are made of metal in hand-
some colors. The front is handsomely decorated with fancy
designs and figures. In the centre stands an accurate ther-
mometer; the whole thing being so simple that a child will
understand it at once. When the devastating hurricane,
cyclone and wind storms are approaching your home, this
machine warns you long ahead, giving you time to prepare.
It is a wonderful machine, and will save your life and many
a dollar besides. It tells you whether you had better take
your umbrella with you to-day. It tells a lady the weather,
and she will know the most suitable dress to wear, etc. Enclose
50 cents to Morse & Co., Box 897, Augusta, Me.
Mention this paper when you write.

Recent Publications.

FIFTH annual report of the Ohio State Forester's Bureau, by Adolph Leue, Secretary, Cincinnati, Ohio.

SEVENTH biennial report of the Kansas State Board of Agriculture. M. Mohler, Secretary, Topeka, Kansas.

MUSHROOMS. How to grow them. A practical treatise on mushroom culture. Published by Orange Judd Co., New York.

ANNUAL catalogue and annual report of the president and treasurer of the Massachusetts Institute of Technology, of Boston, Mass.

How to Cook Vegetables, by Mrs. I. T. Rorer, published by W. Atlee Burpee & Co., Philadelphia, Pa., for distribution among their customers.

ANNUAL report of the Board of State Viticultural Commissioners. Sent on receipt of seven cents for postage, from the office of the board, 317 Pine street, San Francisco.

FUNGUS diseases of the grape and other plants and their treatment. A valuable work for vineyardists and horticulturists. Price seventy-five cents. Published by J. T. Lovett Co., Little Silver, N. J.

ANNUAL report of the chief of the Bureau of Statistics on the Foreign Commerce and Navigation, Immigration and Tonnage of the United States for the year ending June 30, 1890. From the Treasury Department, Washington, D. C.

CLYDESDALE Stud Book, Vol. XIII, containing pedigrees of mares having produced previous to 30th of September, 1890, and stallions foaled before 1st of January, 1891. From the secretary of the Clydesdale Horse Society, Arch. McNeillage, 46 Gordon street, Glasgow, Scotland.

THE Nursery Book, a complete guide to the multiplication and pollination of plants, by Prof. L. H. Bailey, editor of the *American Garden*. This is a new book on the propagation of plants that simply tells plainly and briefly all that a practical nurseryman wants to know. The illustrated chapter on pollination is new and especially interesting. Price: cloth, \$1; paper, 50 cents. Rural Publishing Co., New York.

HOME FLORICULTURE.—The appropriate name of this book indicates well its scope. It is written by E. E. Rexford from his practical experience, is a reliable guide to raising, keeping and blooming plants in the house as well as in the garden. It is a manual that every housekeeper who cares for flowers and handsome plants will find useful. Written in an easy, familiar style, every subject is so plainly treated that it cannot be misunderstood. Over two hundred pages, fully illustrated. Printed in good, clear type and handsomely bound. It is sent out by James Vick, seedsman, which is a sufficient warranty of its worth. Price one dollar and fifty cents, for which sum it will be sent by mail to any address.

CATALOGUES RECEIVED.

Grape Vines. T. S. Hubbard Co., Fredonia, N. Y.

Dundee Nursery. David Hill, Dundee, Kane county, Ill.

Threshers and Engines. C. Aultman & Co., Canton, Ohio.

Floral catalogue from A. B. Davis & Son, Purcellville, Va.

Farm Wagons. South Bend Wagon Co., South Bend, Ind.

Crawford's Catalogue. M. Crawford, Cuyahoga Falls, Ohio.

John Gardiner & Co., Seedsmen, 21 North 13th St., Philadelphia, Pa.

Fine Nursery Stock. Fred W. Kelsey, 115 Broadway, New York.

Livingston's True Blue Seeds. A. W. Livingston's Sons, Columbus, Ohio.

Seeds—garden, field and flower. Robert C. Reeves Co., 185 Water St., New York.

Seeds, Plants and Bulbs. Isaac F. Tillinghast, La Plume, Lackawanna county, Pa.

Ornamental Trees, Plants, Vines, Fruits, etc. Samuel C. Moon, Morrisville, Bucks county, Pa.

Illustrated catalogue and price list of Myer's Spray Pumps. F. E. Myers & Bro., Ashland, Ohio.

Cheese Factory, Creamery and Dairy Apparatus and Supplies. H. McK. Wilson & Co., St. Louis, Mo.

Peter Henderson & Co.'s Manual of Everything for the Garden. Price 25 cents. Peter Henderson & Co., 35 Cortlandt St., New York.

EXPERIMENT STATION BULLETINS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

ALABAMA.—(State Station, Auburn) Bulletin No. 21, December, 1890. A new root disease of cotton. Report of Alabama weather service. Bulletin No. 22, January, 1891. Experiments with cotton. Report of weather service. February 1, 1891. Third annual report.

ALABAMA.—(Canebrake Station, Uniontown) Third annual report.

CALIFORNIA.—(Berkeley) Bulletin No. 91. Port and sberry wines in California. Importation of Italian grapes. Importation of olives.

COLORADO.—(Fort Collins) Bulletin No. 14, January, 1891. Sugar beets.

ILLINOIS.—(Champaign) Bulletin No. 13, February 1891. Field experiments with corn. Bulletin No. 14, 1890. Milk tests; methods of testing milk. Bulletin No. 15. The fruit bark beetle.

LOUISIANA.—(Baton Rouge) Bulletin No. 7. Annual report for 1890. Bulletin No. 8. Annual report of North Louisiana experiment station for 1890. Bulletin No. 9. Sugar-cane borer and its parasite.

MICHIGAN.—(Agricultural College P. O.) Bulletin No. 70, January, 1891. Vegetables, varieties and methods. Bulletin No. 71, February, 1891. Beet sugar and sugar beet culture. Bulletin No. 72, February, 1891. Six worst weeds.

MINNESOTA.—(St. Anthony Park) Bulletin No. 15, February, 1891. Wheat. A comparison of foreign and native varieties, the selection and changing of seed, etc.

MISSOURI.—(Columbia) Bulletin No. 13, January, 1891. Reports on spraying for the codling moth, apple scab and black knot of the grape. Reports on strawberries, raspberries, blackberries, tomatoes, peas and potatoes. List of new fruits received for testing.

NEW YORK.—(State Station, Geneva) Bulletin No. 26, January, 1891. The New York fertilizer control and fertilizer analysis. Outline of history of commercial fertilizers. General principle underlying the use of fertilizers.

NORTH CAROLINA.—(Raleigh) Bulletin No. 73, October 15, 1890. The best agricultural grasses.

NORTH DAKOTA.—(Fargo) Bulletin No. 1, January, 1891. Grain smuts. February, 1891. First annual report.

OREGON.—(Corvallis) Bulletin No. 8, January, 1891. Notes on varieties of wheat and flax. Annual report for 1890.

SOUTH DAKOTA.—(Brookings) Bulletin No. 21, February, 1891. Small grain.

TENNESSEE.—(Knoxville) Third annual report for 1890.

VIRGINIA.—(Blacksburg) Bulletin No. 8, January, 1891. Potato tests. February, 1891. Circular concerning diseases and insects affecting the apple and grape.

WISCONSIN.—(Madison) Bulletin No. 26, January, 1891. Sugar-beet culture in Wisconsin.

U. S. DEPARTMENT OF AGRICULTURE.—(Washington, D. C.) Farmers bulletin No. 4. Fungus diseases of the grape and their treatment.

\$1000.00 a year is being made by John R. Goodwin, Troy, N.Y., at work for us. Reader, you may not make as much, but we can teach you quickly how to earn from \$5 to \$10 a day at the start, and more as you go on. Both sexes, all ages. In any part of America, you can commence at home, giving all your time or spare moments only to the work. All is new. Great pay SURE for every worker. We start you, furnishing everything. EASILY, SPEEDILY learned. PARTICULARS FREE. Address at once, STILSON & CO., PORTLAND, MAINE.

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MR. PARMELEE sold in three days, 116 Copper Coins for \$6.95; 25 Silver Coins for \$4.73; 1 Gold Coin for \$1.70. And we can prove that others have done nearly as well.

Coin Collecting Pays Big

If you have any Old Coins or proofs coined before 1878, save them, as they may be worth a fortune. Illustrated circulars on rare coins free at office or mailed for two stamps.

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Wanted in every County to act in the Secret Service under instructions from Capt. Grannan, ex-Chief of Detectives of Cincinnati. Experience not necessary. Particulars free. Address Grannan Detective Bureau Co. 44 Arcade, Cincinnati, O.

10 CENTS (silver) pays for your address in "AGENT'S DIRECTORY," which goes whirling all over the United States, and you will get hundreds of samples, circulars, books, newspapers, magazines, etc., from those who want agents. You will get lots of good reading free and will be WELL PLEASED with the small investment. List containing name sent to each person answering.

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A BIG OFFER

50c. MADE IN A MINUTE. If you will hang up in the P. O., or some public place, the two show bills that we send, we will give you a 50c. cert., and send it in advance with samples and bills. This will trouble you about one minute, and then if you want to work on salary at \$50 or \$100 per month, let us know. We pay in advance.

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A PRESENT.

SEND us your address and we will make you a present of the best Automatic WASHING MACHINE in the World. No wash-board or rubbing needed. We want you to show it to your friends. Or act as agent if you can. You can COIN MONEY. We also give a HANDSOME WATCH to the first from each county. Write quick. Address N. Y. LAUNDRY WORKS, 25 Dey St., N. Y.

\$6 A DAY AND OUTFIT FREE! AGENTS WANTED EVERYWHERE! Grandest Money making business ever offered. A Golden Harvest for the next 3 months. A Brand New Article. Everyone buys. \$75 per month Salary and Expenses to competent men. Also team furnished free. Sample case of goods and full particulars free. Don't fail to write to-day.

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AGENTS easily make Big Wages selling the Peerless Atlas of the World, in handsome and heavy Leatherette Board Covers, with ornamental Gold Title. It sells on sight, because all who see it acknowledge it to be the best ever offered for the price. Locates towns, cities, railroads, etc. Full of statistics, with Census of 1890. Illustrated. Agents make 100 per cent. Address Mast, Crowell & Kirkpatrick, Springfield, O.

Corns Positively Cured.

Daisy Corn Cure, 15 cents a box. Other remedies fail; this does not. Sold by Druggists, or sent post-paid on receipt of price. Star Union Cure, 25 cents.

JOHNSTON CHEMICAL CO., 145 E. 23rd Street, N. Y.

NATURE'S SPECIFIC The Wonderful Kola Plant, FOR THE CURE OF ASTHMA FREE ON TRIAL.

Discovered by African Explorers on the banks of the Congo river, West Africa, is a certain and unfailing cure for Every Form of ASTHMA. A Positive Cure Guaranteed, or if you desire, NO PAY UNTIL CURED. Office for Export and Wholesale Trade, 1164 Broadway, New York. For Descriptive Book and Trial Case of The KOLA Plant Compound, (HIMALAYA), FREE by Mail, address Central Office, KOLA IMPORTING COMPANY, 132 VINE STREET, CINCINNATI, OHIO.

See New York World, May 18, 1890; Philadelphia Press, May 19; Christian Observer and Medical Journal, April 9; etc., for full accounts of this wonderful botanical discovery. The Christian Evangelist, May 30, 1890, says editorially: "If no other result than the discovery of the Kola plant followed the explorations of Stanley and associates, surely their labors were not in vain. We have the most convincing proof that it is a certain and unfailing cure for Asthma in all its forms, and is the most valuable medical discovery of this century." Remember, NO PAY UNTIL CURED.

HAIR ON THE FACE, NECK, ARMS OR ANY PART OF THE PERSON QUICKLY DISSOLVED AND REMOVED WITH THE NEW SOLUTION MODENE

AND THE GROWTH FOREVER DESTROYED WITHOUT THE SLIGHTEST INJURY OR DISCOLORATION OF THE MOST DELICATE SKIN.

Discovered by Accident.—In Compounding, an incomplete mixture was accidentally spilled on the back of the hand, and on washing afterward it was discovered that the hair was completely removed. We purchased the new discovery and named it MODENE. It is perfectly pure, free from all injurious substances, and so simple any one can use it. It acts mildly but surely, and you will be surprised and delighted with the results. Apply for a few minutes and the hair disappears as if by magic. It has no resemblance whatever to any other preparation ever used for a like purpose, and no scientific discovery ever attained such wonderful results. IT CAN NOT FAIL. If the growth be light, one application will remove it permanently; the heavy growth such as the beard or hair on moles may require two or more applications before all the roots are destroyed, although all hair will be removed at each application, and without slightest injury or unpleasant feeling when applied or ever afterward. MODENE SOFTENS AND REFINES THE SKIN.

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We Offer \$1,000 FOR FAILURE OR THE SLIGHTEST INJURY. EVERY BOTTLE GUARANTEED.

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PRICES REDUCED
Best Fences and Gates for all purposes. Free Catalogue giving full particulars and prices. Ask Hardware Dealers, or write THE SEDGWICK BROS. CO. RICHMOND, IND.
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"EMPIRE"
WELL DRILL
Best in Market.
Wells Made and Machines sold anywhere. Send for circular. Mention this paper.
Rust Artesian Well Co., Ithaca, New York.

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Woven Wire.
WIRE ROPE SELVAGE the BEST. PRICES REDUCED. Sold by dealers. FREIGHT PAID. McMULLEN'S POULTRY NETTING. Nothing. No sagging! No lagging! Extra Heavy Selvage. The McMullen Woven Wire Fence Co., Chicago, Ill.
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MANUFACTURED BY
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Successors to the Empire Well Anger Co.,
Mounted and on Sills, for deep or shallow wells, with steam or horse power.
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WE CAN SAVE YOU OVER 30 per Ct.
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If goods are not satisfactory, we pay freight both ways. What more could be asked? Before purchasing be sure and write us.
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ARE WORTH DOLLAR FOR DOLLAR WHEN OTHERS ARE WORN OUT.
NEW GIANT JUNIOR GIANT
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SAVE GRASS THAT OTHERS LEAVE.
SUIT EVERY PURSE AND EVERY TASTE
For Sale Everywhere.
For Copy of "Whys and Wherefores," write to
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A SOLID STEEL FENCE.
MADE OF EXPANDED METAL.
For RESIDENCES, CHURCHES, CEMETERIES, FARMS GARDENS, Gates, Arbors, Window Guards, Trellises, Write for Illustrated Catalogue. No. 18. CENTRAL EXPANDED METAL CO.
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Angle of Teeth Adjustable to work at desired depth.
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Will do work no other can.
Style A has two gangs. Style B has four gangs. Leaves No Furrows or Ridges.
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MANUFACTURED BY P.P. MAST & CO. SPRINGFIELD, O.
With METAL WHEELS and SPRINGS at Ends of Beams.
This Cultivator has the rear ends of the beams pivoted to a Cross-head to which the Shovel Standards are attached and a secondary beam or rod pivoted to the coupling in front and to the Cross-head in the rear, by which the Shovels are carried parallel with the axle, whatever may be the position of them in being moved sideways. The spring at the front part of the beams supports them when in use, and enables the operator to move them easily from side to side and assists in raising when he wishes to hook them up while turning at the end of the row. This Cultivator and can not fail to be appreciated by any farmer who sees it. We also manufacture the BUCKEYE DRILL, BUCKEYE SEEDER, BUCKEYE CIDER MILLS and HAY RAKES.
BRANCH HOUSES:—Philadelphia, Pa.; Peoria, Ill.; St. Paul, Minn.; Kansas City, Mo.; and San Francisco, Cal. Write for Circular to either of the above firms or to P.P. MAST & CO., SPRINGFIELD, OHIO.

CIDER MACHINERY.
POWER SCREW HYDRAULIC OR KNUCKLE JOINT GRATERS, Elevators, Etc.
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STAR BAIL CHURN.
Best Churn in the World.
A child can work it. No churn cleaned so easy. No dashers or paddles, no inside fixtures. Will make 10 per cent more butter. One or two churns at wholesale prices where we have no agents. Write for catalogue 93 and prices. AGENTS WANTED. JOHN MEDERMAID, Rockford, Ill.
Mention Farm and Fireside when you write.

FOSTER \$5.25 HARNESS
OUR \$37.50 ROAD WAGON.
We give a guarantee with all Foster Buggies and Harness sold. Our reputation for good work at low prices is known throughout the country, therefore we can not afford to make any claims that we can not support. Our experience has been "A customer once secured is a customer forever." Write for our illustrated catalogue and join us in our efforts to kill off the pool and trust which is sucking the life-blood from the consumer.



EASTERN EDITION.

VOL. XIV. NO. 16.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, MAY 15, 1891.

TERMS 50 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
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Journal in the World.

Current Comment.

In a recent report of the Department of Agriculture is an article on the permanency of agricultural production, exposing the fallacies of the prophets who are preaching the doctrine that the "pressure of population upon subsistence" is becoming so great in this country that we are nearing our food limits.

The report first calls attention to the fact that Europe has four times as many people as the United States, and that very few of her countries fail to produce enough for their own subsistence. As examples, France, with a population nine times as dense as ours, imports only about 7 per cent of what she consumes, and the Netherlands, with only $2\frac{1}{2}$ acres to each inhabitant, requires but small imports of agricultural products.

Our resources are not exhausted. The report says:

"Is our public land all taken up? A considerable part of the arid area is not even surveyed. With the utilization of all possibilities of irrigation, tens of millions of acres will be opened for cultivation. In lands, as in forest products, the specialist has for years prophesied utter and almost immediate exhaustion, yet lands are still annually patented by millions of acres, and forest products are growing while the reverberations of the axe are dying away. It is not denied that the public land area is decreasing rapidly or that the heavy timber of the forest is melting gradually away, but not so rapidly in either case as sensational writers would intimate.

Some evidently assume that the farm area is identical with the superficial area of the original thirteen states—that all available farming lands are already occupied. By no means. Little more than a third of Maine is in farms, and colonization of the most fertile unoccupied areas of that state are in progress. From a sixth to a fifth of the land in the South is utilized for production, and millions of acres of its richest and deepest soils are as yet untouched. One tenth of the area of Florida is fifteen times the entire breadth of the sugar cane in the United States in 1880, situated several degrees of latitude south of existing plantations, requiring only a system of drainage to become the best cane lands of the United States.

In the report are given tables showing that our wheat surplus is not immediately exhaustible; that wheat growing is not declining in Europe, and that the wheat production of the world is not declining. Having disposed of these fallacies, the report concludes as follows:

This country has not reached the limit of agricultural production. It has not even approached it. One third of its area is either too dry or too wet for present cultivation, awaiting irrigation or drainage. Of the other two thirds there is much not included in farms; its farm area is not all utilized, and the cultivated area may become far more productive.

Farm labor is not sufficiently effective; its distribution could be more harmonious and

profitable. Prices of cereals have sometimes been reduced by oversupply. Cotton, with a product of 22,000,000 bales in three years (a quantity greater than the production of six years prior to 1860) begins to decline in price. At the same time there is a failure to produce the sugar required, though there is cane land sufficient for an ample supply, and beet-sugar lands *ad libitum*, without mentioning the possibilities of sorghum. There might be tens of millions of dollars annually coined from various fibers, large extension of fruit growing and introduction of many economic plants to be made the basis of new industries. The material now produced for food consumption might be put in more attractive form for market, and a large contribution levied upon the gastronomic and aesthetic tastes of consumers.

It is not true that the wheat or the world is declining. It is not difficult to prove the existence of two thousand three hundred million bushels as an average; and there is no prospect of decrease. Annual fluctuations from climatic causes will produce variation in price, which the distribution of harvests of different climates through the year and increase of international transportation facilities will help to equalize. The United States will continue to produce a surplus for export, until the wheat culture of the plains shall have given place to more varied and profitable culture, and increasing numbers of non-agricultural population shall require for bread the entire crop.

It is proper to say that the tendency is towards a better distribution of crops, and to higher prices and greater profits. The proportion of agricultural labor will decrease, non-agriculture will increase, agricultural production will be more varied, rural intelligence and skill will advance, and the farmer be in better position to demand and secure an equitable share in the net proceeds of national industries.

THE new Alliance senator from Kansas remarks:

The people want more money. They do not care much about the tariff; they do not care very much about the coinage; but they want money, and they will not be satisfied until they have money. So you may set it down, that no matter what Republican or Democratic partisans do for an issue in 1892, the masses of the people who are mustering for the rebellion which is coming, will talk about little else than money, more money, cheaper money; and that will be the great issue in 1892 and from that time forward, until success crowns the efforts of the masses.

Under the head of "Cheap Talk and Cheap Money," the New York *Sun* "that shines for all," very vigorously and concisely comments on the above as follows:

It is perfectly true that the people do not care very much about the tariff. They have had too much of the tariff, and talk about it wearisome. It is also perfectly true, and has been since the end of the golden age, that people want money, can't get enough of it, and won't be satisfied until they do. But the money they want is good money—money that is based upon something valuable and represents something valuable. This money is to be got by working. There is no other way in which the Kansas farmers, who have made Peffer a senator in congress, can get money, unless they inherit or steal it, save by the labor of their hands; and if the money which they get in exchange for their labor should be of the fiat kind, which Peffer seems to favor when he talks about cheaper money, they would have given something for nothing. If the Kansas farms were covered two feet thick with irredeemable shinplasters, the farmers would be no better off; in the end they would be much worse off. Neither cheap money nor cheap talk will help the farmer. He must help himself and not rely upon the printing press to make him rich.

The advice is sound and wholesome for Kansas farmers and all others, even if it does come from an eastern political journal, which, however, is the best one

of its class. The farmer who does not now help himself, but sits down and waits for the federal government to make him rich with a gift of cheap money or irredeemable paper currency, is the dupe of political demagogues of the most contemptible stripe.

ONE good outcome of the discussion on the subject of taxation in the Ohio Legislature during the past session, is the submission of an amendment to the constitution to be voted upon next November. Section 2, of Article XII, is to be amended so as to read as follows:

Laws may be passed which shall tax by a uniform rule, all moneys, credits, investments in bonds, stocks, joint-stock companies, or otherwise, and all real and personal property according to the true value thereof in money. In addition thereto, laws may be passed taxing rights, privileges, franchises and such other subject matters as the legislature may direct; but burying grounds, public school-houses, houses used exclusively for public worship, institutions of purely public charity, public property used exclusively for any public purpose, and other property may, by general laws, be exempted from taxation; and the value of all property so exempted shall, from time to time, be ascertained and published as may be directed by law.

If this amendment carries, it shall take effect on the first day of January, 1892. Then it will be possible for the legislature to pass laws that will equalize taxation. Under the present constitution, the exercise of the power of taxation by the general assembly is limited. The object of the amendment is to give the legislature more power than it now has. If adopted, the legislature will have power to regulate taxation. The amendment is now before the people, and demands their careful attention. The contemplated change is no unimportant one.

THE Ohio legislature finally did the right thing and provided that the whole appropriation made to the state by congress for land-grant colleges, should go where it belongs—to the Ohio State University. A most determined effort was made to divide the fund and grab the half of it, but it was fortunately prevented. The undivided fund, which in a few years will amount to \$25,000 per year, now goes where it can do the most good.

Having received this magnificent endowment from the federal government, in addition to large appropriations from the state, the Ohio State University is in better financial condition than ever before. Its best friends are anxious that it shall be able to give a good account of its stewardship, and that it shall do much more for agriculture in the future than it has done in the past.

Success in this line does not altogether depend upon the university itself. It can provide for thorough, practical and scientific instruction in all branches relating to agriculture and make itself attractive; but that alone will not enroll a long list of students. Upon farmers themselves depends whether or not they will send their sons to one of the best educational institutions in the country.

THE last census shows that the cities have increased their population at a faster rate during the last decade than during any former. The urban population is fast gaining on the rural, and may soon equal it. There seems to have

been a strong drift of the population away from the farms to the cities. It has been claimed that improved agricultural machinery has driven laborers from the farm to the city. But such is not the case. The scarcity of farm labor has largely increased the sale and use of improved farm implements. On this account many farmers were obliged to purchase labor-saving implements long before they would have done so, if the number of farm laborers had been equal to the demand. The drift from farm to town has greatly stimulated the manufacture of agricultural machinery.

AN agent of the Department of Agriculture has lately been in Florida investigating the prospects there for growing sisal hemp, from which binding twine and cordage are made. The sisal hemp fiber now used is imported from Yucatan, at an annual cost of about \$5,000,000. In southern Florida a better variety than that imported is found growing wild, and in a few years that state could more than supply the needs of the whole country, if it would undertake to do it. The lack of suitable machinery for separating the fiber from the leaves is the greatest drawback; but that is one that American inventive genius can soon remove. A fortune awaits the successful inventor of a sisal hemp fiber machine.

WHILE the result of the negotiations with Spain in regard to reciprocity has not been officially announced, it is understood that an agreement has been reached whereby the United States is to admit free of duty, sugar, molasses, coffee, hides and tea produced in Cuba. In return Cuba is to admit our agricultural implements free and to lower her duty on our corn, wheat, flour and corn meal one half. Reciprocity is a winner. It will win us trade and enlarge our markets for surplus products. It is only a question of time when we shall have similar treaties with every country with which trade is mutually profitable.

THE Chicago market reports show that the wholesale price of beef advanced $33\frac{1}{4}$ per cent during the month of April. There is no longer any doubt that there is a scarcity of good beef cattle, and that the predicted period of better prices has been reached. Cattle growers have been having a very discouraging time, and many were obliged to abandon the business. Those who had the grit to hold on will receive their reward soon. Get ready to take advantage of an era of good prices for cattle.

IN response to urged demands from the farmers of the state, the Ohio legislature recently passed a law providing for the election of the food and dairy commissioner. The office has heretofore been filled by appointment of the governor. It can no longer be given as a reward for political services, without regard to the interests of the people.

OHIO has fallen in line with many other states and adopted the Australian ballot system. The new law supersedes a very excellent one, but in some particulars it is a decided improvement. While its provisions will not entirely prevent bribery at elections, they will make it much more difficult, and so far the law will accomplish much good.

FARM AND FIRESIDE.

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Our Farm.

THE DAIRY.

HAVING informed your readers in re-
gard to silos and en-
silage, I wish now
to call their atten-
tion to its advan-
tages and practical
applications for the
dairy. The millions
of pounds of poor butter that yearly
crowd our Ohio markets is a very sad
commentary upon the intelligence and
agriculture of our farmers. It should be
reformed and perfect work done instead
of this great waste and disgrace. By aid
of the silo and ensilage, the summer con-
ditions of butter making are greatly ex-
celled in the winter season. Farmers
need good, warm barns; and these should
be so arranged that dairy cows can be
supplied with drink—good, fresh, pure
water to their hearts' content while in the
stables, and not have to skirmish around
in open lots or frozen creeks to find ice-
cold water, and never have a chance to
even drink that in peace, because other
cows would hook them out of the water-
hole before they were half through drink-
ing. We give a cut of a very con-
venient water-trough in the barn, which is
not expensive or difficult to make.

Next to this comes good, high stable
platforms for dairy cows to stand on, only
four feet six inches long from inside
manger or stanchion, with an incline of
about two inches and fully six-inch drop
to bottom of manure gutter, and that from
two to three feet wide, and perfectly
water tight to save all the liquid manure.
I like the Surieg stanchion best to fasten
cows, because they cannot back up and
stand in the manure gutter or lay down
in it, as they will with chain or rope fas-
teners. Many farmers have a holy horror
of extreme cruelty to animals if their
heads are closely fastened. But if suffer-
ing humanity must eat the product that
comes from the other end of the cow, it is
quite an important item to have it clean
and in the best possible sanitary condi-
tion. No man or woman can make good,
pure, sweet butter from milk that is in
a filthy condition, or that is allowed to re-
main in the milking stable any great
length of time to absorb the stable odor.
Every farmer should have a milk-stand
just outside his stable doors in the open
air, and as soon as a cow is milked, the
milk should be carried out to this place
and poured into cans or pails for proper
cooling and airing.

For ensilage, both night and morn-
ing, good, big bushel-basketful gives
an excellent concentration and a fair amount
of food, if the quality of the ensilage is

up to the standard I have named in
former articles. Then in addition to this,
a good feed of clover hay at 11 A. M.
is a perfect-balanced feed ration for
a dairy cow, and she will shell out the
milk with great generosity. If the farm
does not supply clover hay, then any other,
the best you have, should be fed. If all
kinds of hay are gone, then feed straw. It
is economy and the most perfect farming
to feed every particle of straw grown
upon the farm, as well as all the hay, and
then use leaves or saw-dust for bedding,
that only cost the gathering of them in
the fall. I use saw-dust very freely, be-
cause we have a saw-mill close by my
barns, and feed most all my straw to
cattle not giving milk, in order to make
one dry feed a day for them. At about
one o'clock P. M. cattle will drink
heartily, but they will not drink either
night or morning when fed upon ensilage,
because it is so moist.

With perfect milk thus obtained, the
farmer then needs deep-setting milk-cans
of some kind, with covers that fasten on
fairly tight, to shut out air and keep the
cream in a soft condition; and never at-
tempt to make perfect butter out of hard-
crusted cream raised in open-pan setting,
because it is impossible to do so. When
milk is fresh and warm from the cow, it
should be strained through several thick-
nesses of thin muslin folded together. (We
use four thicknesses.) It is sure to sepa-
rate the stray cow hairs from the milk
and you never find them in my kind
of butter. This hot or warm milk should
stand in the open milk-can until perfectly
cooled, by setting the can in some kind of
a vessel of cold water and the can not

at less expense, and brings a far greater
price to the farmer. The warm barns,
silo and ensilage above stated make this
possible.

The cream must be ripened before
churning, and to do this in winter time,
the cream-can must be allowed to stand
in a warm room near a stove about
twenty-four hours, until the cream be-
comes slightly sour, which is easily
known by its beginning to thicken.
No cream should be added to the batch
after you commence to ripen it, because it
will not churn even and much would be
wasted. Every time a skimming of cream
is put with another, the whole should be
thoroughly stirred up together; and when
ripening cream, every few hours it should
be thoroughly stirred up so it will ripen
even.

In winter time you need a little color
for the butter, one teaspoonful of the
cream that will churn, say, ten pounds of
butter, you had best try first, and after that
you can judge of the amount best your-
self. In the summer time, if you have
Jersey or Guernsey cows, you will not use
a particle of color. It will be a very light
color on grass pasture alone, and that is
about the standard of color you should
keep it the year round, which you can
easily manage. The color must always be
put in the cream just before churning. The
butter will then be perfectly even in color.

In winter time or any cool weather
when cream becomes thickened or soured
a little, it should then, if above 66°, be al-
lowed to cool down to about that tempera-
ture or a trifle above it, and then churn.
Concussion churns are best (either box or
barrel churns), because you must have



A, water-trough made of two planks, one 2x10, the other 2x8. B, stanchion, 5 feet high from
floor, about 2 feet from front of manger. C, platform, 4 feet 6 inches, 2 inches incline, cement
floor. D, manure gutter, 2 feet wide. E, walk, 1 foot wide. F, braces to support trough, 2x2x10
inches, placed 3 feet apart.

covered tightly while cooling. We always
do our milking before breakfast or supper
and then let the milk cool while eating
our meals, and after that our men folks
put the can covers on tightly and set the
milk away in summer time into our ice-
water box, and in the winter time into a
cool room which answers the same pur-
pose. Our cans hold forty pounds of
milk apiece and are too heavy for women
to lift. These are the most usual size
milk-cans in use.

In from twenty-four to thirty-six hours
we have the most perfect cream possible
to obtain from milk. It is soft and thin
and can be easily dipped off from the milk
with a deep conical dipper, and it is the
least trouble to handle milk in this manner
that was ever discovered. The farmer then
has perfectly sweet, skim milk to feed
to pigs and calves, because in winter time it
can stand thirty-six hours and in hot
weather twenty-four hours, and thus se-
cure every particle of cream in the milk,
and the milk remains sweet. When first
filling the can with milk, the best results
are to put in about thirty-five pounds of
milk and five pounds of clear, cold water
to thin the milk and better liberate the
cream to rise more perfectly; it also helps
to cool the milk more perfectly. Any kind
of tall milk-cans will do that can be kept
in a large, plank water-box with tight
cover over it, and in this manner as per-
fect work can be done as in the most ex-
pensive creamer ever made. When this
soft cream is thus obtained in the hot
weather, churning every day is advisable,
if you have a large dairy; but if not, then
every other day will answer, providing the
cream is kept cool in the cold water-box.

In winter time this same end is accom-
plished by setting both milk-cans and
cream-can in a cool room away from the
fire—but not so cold a place that milk
will freeze. Good butter can be made
easier in winter than summer, and

The handling of cream in hot weather
must vary from the above to meet the
changed conditions of the atmosphere, and
the cream must be kept in cold water, sit-
ting until enough accumulates for a churn-
ing. It can then be taken from its cold place
and allowed to stand three or four hours in
hot weather, when it will thicken and be
ripe. It must then be put back into a cool
place, cooled down to 58° or 60°. We churn
at 58° in the summer time, when it will
then churn with precisely the same results
as above stated. A butter maker needs to
exercise a little common sense, a great
amount of cleanliness, and do this work
exactly on time, when most needed. En-
tertainment of company or other house-
hold duties must stand to one side if
perfect butter is made at the home
dairy.

If men attend to the making of butter,
that is, do the churning and pressing in
the salt or using the hand butter-worker
(which all dairymen should provide, be-
cause they only cost from five to six dol-
lars apiece, and will do perfect work),
there is no danger of breaking the grain
of butter and making it salvy; but thor-
ough and even salting of butter is then
done in a very few minutes. Now, kind
readers, this chapter is no wild theory; it is
a recitation simply of my own individual
work three times each week; and
from the first of May until winter each
year I have the management of the
largest and best creamery in Ohio. Our
summer butter is made in our creamery,
but the winter butter is made by myself
at our home, and my home dairy consists
of high-grade Guernsey cows, the largest
and best cows of the butter type in the
world, in my judgment. We intend to
have our heaviest flow of milk in winter,
and by this means we make the most
money out of the dairy. Follow this ad-
vice and example and you will grow rich
and happy.

H. TALCOTT.

Ashtabula county, Ohio.

SUGGESTIONS FROM STATION BULLETINS.

BY JOSEPH (TUISCO GREINER.)

INJURIOUS INSECTS.—Bulletin 12, of the
Massachusetts Agricultural College Ex-
periment Station (Amherst, Mass.), for
April, 1891, contains an interesting report
on insects, compiled by the entomologist,
Prof. C. H. Fernald. The first insect of
which it gives a description with illustra-
tion, is the tiny creature known as the
"bud worm" (*tinctocera ocellana* S. V.),
which has become very abundant in some
parts of the north-east, and is doing a
vast amount of damage to fruit trees.
The parent is a moth, which emerges dur-
ing the latter part of June or early in July.
The female lays its eggs on the leaves of
apple and various other trees. The young,
as soon as hatched, feed on the leaves, and
are about half grown when cold weather
sets in; and they hibernate in that stage.
In early spring they again make their ap-
pearance and begin their work of destruc-
tion by eating their way into the buds of
fruit trees, then just beginning to swell.
If one bud is not enough for one of them,
it goes to a second, and so on. When a
terminal bud is destroyed, the growth is
continued from a lateral one, and as often
occurs, the terminal bud of this lateral
branch is destroyed by these minute
caterpillars, thus giving a peculiar appear-
ance to the older trees of an orchard, so
that one can easily recognize the work
of the bud moth by the irregular growth
of the branches. To destroy these cater-
pillars, it is desirable to gather all the
leaves from under the infested trees in the
fall and burn them, and also to shower
the trees with one pound of Paris green in
one hundred and fifty gallons of water, in
the spring when the buds first begin to
swell. This application will also prove
valuable for the destruction of the
tent caterpillar and other leaf-eating in-
sects.

Nothing new is given in the way of
remedies for the black squash bug. It is
not necessary for me to make any extracts
concerning the life history of this dis-
gusting insect, for every gardener has a
far more intimate acquaintance with this
creature than is profitable or desirable for
him. Still, I am continuously asked about
remedies for the pest, and I am sorry to say
that all experiments aiming at its destruc-
tion by applications of insecticides (Paris
green spray included) have proved unsuc-
cessful and unsatisfactory. Neither py-
rethrum (buhach), nor kerosene, nor to-

bacco, nor any other substance heretofore tried that kills some insects by contact, seem to be particularly offensive to this hardy animal. The only remedy seems to be the one once advertised at twenty-five cents as a sure remedy for the potato bug, and which consisted of two little blocks of wood, with directions to lay the bug on the one block and press the other upon it. Simple bug pincers or tongs, made of wood or a piece of band iron, will serve a good purpose. The bugs should be hunted up and killed by a tight squeeze before they are ready to lay their eggs. If any have escaped detection the egg may be discovered and crushed. Water drained from a barn-yard is a good remedy, as it tends to promote the vigor and luxuriance of the plants, thus rendering them less liable to suffer from the punctures of the bug. The plants should be visited daily and searched carefully, as the bugs remain quiet in the day time on the stems, or on the ground under the leaves. Shingles, strips of board, or other similar objects may be laid on the ground for the bugs to hide under, when they may be captured and destroyed.

The pea and bean weevil also will need no introduction to the readers of the FARM AND FIRESIDE. We all know them only too well. The most important thing to do, in order to prevent their ravages, is to plant seed that is free from them. Exposure of peas and beans (as well as other grains) to the vapors of bisulphide of carbon in a closed vessel for twenty-four hours, or to 150 degrees of heat for a still longer period, as I have stated on previous occasions, is sure death to the weevils contained in such seed. The weevils can also be killed by taking the peas or beans that are to be kept for seed and enclosing them in tight vessels with camphor; also by keeping the seed two years, taking care that the beetles do not escape. A good plan is to tie the peas in tight bags and hang them in an airy place until Christmas, and then in order that they may not become too dry, put them in tighter vessels. Sound peas only should be planted.

One of the hardest things to get at among injurious insects is the larva of the May beetle. It does an immense amount of damage, eating the roots of grass, strawberries and other plants. Last fall I found one or more of the half-grown grubs eating away at the roots of almost every bulb in a lot of Prizetaker onions at the time of harvesting them. Fortunately, these grubs have their natural enemies, shrews, moles, skunks, raccoons, crows, robins, blue jays, blackbirds, etc. A white fungus also kills a good many. But all these natural enemies are not sufficient to protect us. In some cases the application of wood ashes to the soil has proved very efficient. Shaking the beetles from the trees upon sheets, and then burning them, is recommended. I will suggest that they make excellent food for domestic fowls. Late fall plowing, in order to reach the grubs and bring them to the surface to be destroyed by frost or birds, must be deep. Swine and domestic fowls are also fond of the grubs, and will destroy them when allowed to have access to the infested field. For the destruction of the grubs on lawns, the kerosene emulsion may be useful, but it will be necessary to drench the ground very thoroughly for the purpose of reaching them. For large lawns, or in fields, it would probably be an expensive method. A trial might be made with solutions of kainit.

The onion maggot seems to have annoyed many of my friends, to judge from the various requests for remedies recently received by me. I haven't had much experience with it, and do not desire any. Some claim that it is the same as the radish maggot, and that they prefer radishes to cabbage, and cabbage to onions. At any rate I have had my radishes badly infested by maggots, the cabbages close by much less, and the onions, also side by side, entirely free. For this reason I always plant a few rows of radishes, and cabbage also, near the onion patch, in order to attract the parent of these maggots, and thus protect my onions. The parent is a hairy fly, somewhat resembling our common house-fly, and appears in early June, flying about and depositing its eggs on the leaves of the young plants. There are successive broods during the season, and the winter is passed in the pupa stage. The following remedies have been suggested: (1) Scattering dry, unleached wood ashes over the plants as soon as they are

up, while they are wet with dew, and continuing this as often as once a week through the month of June. (2) Planting the onions in a new place, as remote as possible from where they were grown the previous year. (3) Scattering pulverized gas lime along the rows to keep the flies away. (4) Watering with a liquid from pig-pens collected in a tank. (5) Taking up and burning the infested onions as soon as they show the effects of the attack by wilting and changing color. (6) Dropping a little diluted acid or kerosene oil on the infested plants, to run down them and destroy the maggots in the roots and in the soil around them. (7) Growing the onions in hills rather than in rows, so that the footless maggots cannot make their way from one hill to another.

I am inclined to think that lime water, made from freshly-burnt lime, or a solution of kainit or muriate of potash applied freely enough to the infested plants to soak into the ground thoroughly, will be found a better remedy than any suggested in Mr. Fernald's bulletin.

For the cabbage worm, the use of pyrethrum as a powder, blown on the plants by a hand bellows during the hottest part of the day, is recommended as the best remedy. The pyrethrum powder will be strong enough if mixed with four or five parts of flour to one part of pyrethrum. If buhach is used, it may be made considerably weaker, and will still be effective. The application is to be repeated as often as needed.

The bulletin treats also on tent caterpillars and many other insects injurious to fruits.

TURNING OUT THE COWS.

One of the pleasant events on the farm in the spring is the turning out of the cows to pasture. All winter they have been shut in, kept in the stable except at drinking time when they had only the run of the yard. But now they are going to green pastures to being again what must be to a cow an ideal existence—if cows have ideals—quietly grazing all summer, chewing the cud in the shade and slaking thirst at the meadow brook. The sun is high in the heavens now, the earth has spread out her green coverlid in the pastures, and the ground has hardened after the rains so that the hoofs will not cut the turf, and the time has come to free the herd. They are turned into the lane leading to the pasture; they understand; they catch the spirit of it and a race for the pasture begins.

Like, or unlike, lambs they frisk and frolic, or attempt to, and cut capers all day. No one would suppose that this sedate and venerable cow, with wrinkles on her horns nearly to the brass button to the tip, would be guilty of such undignified behavior; but it is excusable, for she has escaped from the stable and from corn husks, beer grains and ensilage and has returned to wide and sunny pastures and to sweet, succulent herbage. The farmer grumbles a little, and says: "We'll get no milk to-night," but he knows that he will get more by and by, and he ought to be willing that the cows should have one day of play after their long stay in the stable.

GEORGE APPLETON.

HYBRIDS.

A correspondent in Ohio asks: "Are there any books I can purchase from which I can learn to manipulate the flowers of different species of fruits so as to grow hybrids? I have become much interested in the subject by reading your articles and that of Prof. Lazenby in late issues of FARM AND FIRESIDE."

I am sorry to say that I know of no such books, from which a beginner could get much information of value. To start out with, I would say that the successful hybridizer seems to be born such, and not made by reading books or "going to school."

To be a successful hybridist, a man must be a great and continuous worker, have a patience much longer than Job's, an intense love for his work, and either acquired some skill and the rudiments of the science, or have these born in him as a free gift of nature. The one who wishes to learn how to produce hybrids should first procure and read carefully a textbook like Dr. Gray's "Structural and Systematic Botany." This would give him a general understanding of the generative organs of plants, their parts, correlation of parts, the division of these parts into classes, and their names; their natural

position one to the other, in regular or, rather, natural order; the division of the principal generative organs into male and female groups and their action, one set on the other, so far as known, in begetting that wonder of wonders in nature, a new life.

Then in further reading, to help especially in hybridity, we must gather it up by bits and snatches, as we may be able to find it. Darwin's "Plants and Animals Under Domestication" and his "Origin of Species" give many facts bearing on this subject. In fact, they are complete reservoirs of general and practical facts in nearly every science. No man's education is complete until he has read them. The man never lived, and never will live, whose education is complete, even in one natural science.

As there seems to be quite a general interest among professional and amateur fruit growers, nurserymen and florists, for facts in hybridity, I will give what little I know about the manipulation for producing hybrids between species of our common fruits.

A hybrid is a cross between two species of life. Thus, a mule is a hybrid resulting from sexual union between two species belonging to the same natural family, the horse and the ass, and is the most common and best known of hybrids, and the only one long bred by man for his use. The mule is generally infertile with its own kind, and also with both parents; or, in other words, does not breed with either, except very seldom. This fact has given the general but wrong idea that hybrids are infertile, which Darwin and late experiments of others have proved not correct. And on this fiction is based the pet theory of most writers that this lack of breeding power in hybrids is a special provision of Providence to prevent the obliteration of species; or, in other words, a preventive of all the life on this earth from becoming all mixed up and coming in time to one general level or species, while the true reason is the lack of sexual attractions and desires between the males and females of different species. This sexual affinity is the force that governs species in the state of nature.

Hybrids, as a rule, do not originate in nature. As a very general rule, exceptions are exceedingly rare, though such things have happened. Where they have, they are at once obliterated, as a rule, from being outcasts or finding nothing to mate with.

These remarks are necessary to explain the first law in hybridity; namely, hybrids are generally the result of forced unions between males and females of different species. What the limit to such fertile, forced unions between animals or plants are we do not know. We know that in animals it seems to be very narrow, while in plants it is much broader.

Besides, the generative organs in plants are such that they can be seen and manipulated artificially; they are also passive under manipulation, and sexual affinity, likes and dislikes, are not to be overcome; they are wanting.

D. B. WEIR.

(To be continued.)

BREAKING COLTS.

I am always pleased to see our faithful servant, the horse, kindly treated and the colts in training carefully handled. That seems to have been the intention of "Practical Farmer," and, in the main, should judge him successful; but there is one thing about his treatment of his colts I am disposed to criticize.

I do not know of any one thing among the customs of farmers that more fully

exhibits the habit of doing as our fathers did, without thinking whether it was right or wrong, than the arranging of the eveners when using a large and a small horse together, or colt and a fully-matured horse. Our friend puts his yearling colt with a strong horse, and in the kindness of his heart wishes to make it as easy for the colt as possible, and gives it three inches the advantage and his two-year-old colt two inches. Well, this is the way our fathers did. They thought one inch quite a help, two inches a big difference and three inches the very extent; or, if perchance an extraordinary occasion seemed to demand a little more, four inches was given. It was supposed the larger horse was pulling the greater part of the load.

Now, I wish to give my brother farmer, and all others who use horses, an easy lesson in mathematics. We will suppose he has an evener of usual length—4 feet, clevises 3 inches from the end, 42 inches inside the clevises. I think he will not question the ability of the strong horse to pull double that of the green yearling colt. This admitted, how shall we divide the eveners to make him do this? We will further suppose that he hitched up the colt to a lumber wagon that might have weighed, with himself and another man to ride with him, 1,200 pounds. Now, it can be seen at a glance that for the horse to pull 800 pounds and the colt but 400, the colt's end of the eveners must be double the length of that of the horse. As it is customary to move in the clevis on the large horse, instead of being 3 inches it should have been 10½, the center of that end.

Let us suppose still further that when you worked that two-year-old colt, you wanted to pull a load of 2,000 pounds. Now, honestly, don't you think that strong horse is as well able to pull 1,200 pounds as the colt is 800? These amounts are as 3 to 2. Now divide the eveners in that way and what is the result? There are three sevenths in each end; take off one of them from the horse's end, by moving in the clevis 7 inches, and you have it—one end 21 inches and the other 14.

If you are as surprised at this result as I was when I first saw it, you may like a rule to prove this to be correct. It is on the same principle as steelyards, or scales in balancing, and a rule in this is that the length of beam and amount of weight, multiplied together on each end, must be equal. Take any length of eveners and multiply the length of the end you don't intend to change by the weight for that end; divide the product by the weight on the other end and you have the length of the short.

Take, for example, a three-foot eveners, 26 inches, with the last-named load. 18 multiplied by 800 gives 14,400; divided by 1,200 gives 12; so you would need to give 6 inches the advantage on this length of eveners.

Figures won't lie, and I hope they will convince you that when you hitch up another yearling or two-year-old colt, you should take a bit and bore a hole in a different place. I wouldn't be surprised if, notwithstanding you were convinced of the facts as stated, you would, from sheer force of habit, feel inclined to compromise on 5 inches instead of 7, or 6 or 8 instead of 10½.

In conclusion, I will just state the way I blundered onto this subject. I was brought up on a farm. In my youthful days I worked on the farm in summer and taught district school among the farmers in winter. I was accustomed to give practical problems for scholars in arithmetic to solve. This problem occurred to me and was given to the senior class without thinking what the answer might be.

"Suppose I work a large and small horse together. The large horse is as well able to pull 1,500 pounds as the small one 1,000, and wishing to haul a load of 2,500 pounds, how much the shortest end must the large horse have on a 3½-foot eveners?"

When the result was announced by one of the large boys as 7 inches, I was so surprised I could not believe him correct until I had thoroughly examined it.

After that I frequently had it put upon the blackboard when farmers were present, almost invariably causing a surprise. My sympathies are with the under dog in the fight, and I wish to plead the cause of the unfortunate small horse and the often-abused colt, and make it so plain that any one can understand.

P. HALL.

Nebraska.

Creates An Appetite

A good appetite is essential to good health, and when the natural desire for food is gone, strength will soon fail, just as the fire burns low when fuel supply is cut off. After the recent wide-spread prevalence of "the grip" and other diseases, causing general physical demoralization and weakness, many people find themselves languid and without appetite. There is nothing for which we recommend Hood's Sarsaparilla with greater confidence than for loss of appetite, indigestion, sick headache and other troubles of dyspeptic nature. This medicine gently tones the stomach, assists digestion, and makes one "real hungry." Persons in delicate health, after taking Hood's

Sarsaparilla a few days, find themselves longing for and eating the plainest food with unexpected relish.

"Having been troubled with dyspepsia, loss of appetite and a feeling of no ambition to work, I was advised to try Hood's Sarsaparilla. I purchased one bottle and feeling benefit therefrom bought two more and am now entirely cured. I always keep Hood's Sarsaparilla in my house as I think it a good family medicine." CHAS. PARKER, Cor. Shelby and Congress Streets, Detroit, Mich.

N. B. If you decide, from what you have heard or read, that you will take Hood's Sarsaparilla, do not be induced to buy anything else instead.

Hood's Sarsaparilla

Sold by all druggists. \$1; six for \$5. Prepared only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

Sold by all druggists. \$1; six for \$5. Prepared only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.



THE PICKLE INDUSTRY.—A Missouri subscriber asks for information about raising cucumbers and pickling them for market. In this vicinity almost every farmer raises his patch of from one to five acres, and the crop usually pays fairly well. Most of the growers contract the crop at about twelve cents a hundred to people who make a business of putting the cucumbers down in brine for winter sale. Some growers, however, prefer to dispose of their crop in pickle shape. They employ no middlemen and they often get twenty-five cents a hundred for their crop. The growing city of Buffalo offers an almost unlimited market for such products. But pickles are wanted in every city and village, large or small, and pickle raising to the extent of the home market is seldom otherwise but profitable. Before engaging largely in the industry, one should look around to make sure of the demand for one's crop. Select a nice, rich piece of ground (moist, not wet; loamy soil preferred). A young clover sod will do first rate. Prepare it well by plowing and harrowing; then mark out furrows five feet apart both ways and put several shovelfuls of fine, rich compost into each intersection. This manure should be thoroughly mixed with the soil; and other fertilizing materials, such as ashes, hen manure, concentrated fertilizer, etc., may also be added if available. All these are stirred into the soil, when a dozen seeds or more may be planted in each hill, lightly covered and thoroughly firmed with the foot. The "hill," however, should be level with the surface of the ground, not elevated. When the plants are out of danger from bug attacks, they may be thinned, the best four or five to be left to each hill. Tobacco dust, or tobacco dust and bone meal, half and half, or other mixtures of tobacco dust, if applied freely around the vines—by the shovelful—will keep the yellow-striped beetles, and perhaps other insects, at a respectful distance. Where tobacco dust can be had for the hauling, as in some places, it is a cheap remedy and a good fertilizer at the same time. The black squash-bug, where troublesome, can only be kept in check by hand-picking and washing. Mr. Henry Gartner, an Ohio subscriber, writes that he uses Scotch snuff as a never-failing remedy for the yellow-striped cucumber beetle. It requires but little of it—ten cents worth, he thinks, being enough for one hundred hills. Still, I would rather use the tobacco dust by the shovelful.

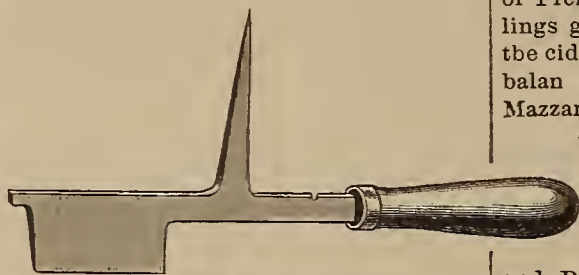
The proper time for planting cucumbers for pickles in this vicinity is about June 1st, or as soon as the ground has become warmed through and danger from late frosts is past. It may be a good plan to sow the whole field to buckwheat at the same time. This is an additional protection against insect attacks. Insects do not seem to have much fondness for it, and it serves to hide the cucumber plants. Give good cultivation, killing the buckwheat after it has served its purpose, and in hoeing, draw the soil up towards the plants. The right pickle size is from three to six inches in length, and the nearer they are to the three-inch size, the better they are liked by buyer and consumer, and the more profitable they will be for the grower. Consequently, the patch must be picked over frequently, say every other day during the season. Cut the young cucumbers off with a sharp knife or pair of scissors. Never tear them off and always pick them clean as you go along. If to be kept for sale during winter, they are put into a brine in barrels or large vats, care being taken that they are always completely covered with the brine.

A GOOD CABBAGE FERTILIZER.—Mr. Gregory, the well known seedsman, has been well pleased with a fertilizer made as follows: A two-inch layer of fine soil was spread on a shed floor and well sprinkled. Upon this was put a two-inch layer of bone flour, also well sprinkled; finally, from one to two inches of unleached wood ashes, which also received a thorough moistening. In this order a

moistened heap was formed about three feet high. In about two weeks this heap had heated sufficiently to dry the moisture, when it was cut down with a hoe, and all the dry lumps broken up fine. A closed handful of this mixture was put in each cabbage hill before planting. Mr. Gregory says that in all his experience as a cabbage grower (for upwards of thirty years) he never saw finer plants than grew over that manure. This is worth remembering. I would use muck in place of soil, if easily obtained.

FOREIGN ONIONS.—Most of the very large foreign sorts, the Tripoli, the Pompeii, the Silver and Spanish Kings, etc., are rather poor keepers. Still, I think that sets, if properly grown and kept, will remain sound until planting time. My own plan of treating these varieties is the same as the Prizetaker (which seems to be the best keeper among all of this class); namely, by planting seed in hot-bed or cold-frame in February or March, and transplanting the seedlings into open ground six weeks or so later. Most of these varieties can be grown from seed the first season just as well as from sets. I have had specimens of Italian onions, grown from seed, to weigh a pound apiece quite frequently.

POP-CORN GROWING.—Sometimes I wonder why it is that pop-corn is so seldom found, even in the home gardens. Children like it so well and get such vast amount of fun out of it during the long winter evenings, that no family can afford to neglect raising all that may be wanted. And then it is so easily grown. Only plant it on fair soil and you are sure of a fair crop, for it is so early that the fall frosts will do it no harm. White Rice is the variety usually grown for market, and it is as good as any. So far as I know, there is always a good demand for pop-corn in our markets, and I believe prices, although fluctuating like those of all other things, according to locality,



GRAFTING-KNIFE.

seasons, demand, etc., are usually very satisfactory to the grower, and the net returns several times those that could be expected from the cultivation of ordinary corn. Farmers near cities and larger towns may find in pop-corn a chance worth investigating. Look into your market and the probable demand for the crop. Often you can strike a bargain with some groceryman or confectioner.

EARLY PLANTS.—Here at the North we do not find it as easy to start our tomato plants in February or early March as gardeners do in New Jersey and southward. I want to raise a half acre or so of extra early tomatoes this year, and for this purpose find early-started plants of extra early varieties very desirable. I hit upon the expediency of buying a supply of half-grown early plants from New Jersey. They arrived here April 20th, and were planted out in cold-frame about four inches apart each way. They are quite good sized now, and I think it will be a pretty good test to have 500 Early Rubys grow by the side of King of the Earlies, Earliest Advance and others of that class. I am anxious to try what can be done in growing early tomatoes for market, and believe that there is money in it if properly managed.

Our difficulty in raising good celery plants in open ground is the impracticability of sowing early enough. It depends somewhat on the season. But it is an uncertain thing at best, unless we have a piece of sandy loam in a well-sheltered situation. Then we can sow by April 1st and get good plants by July 1st. Usually it may be better to start the plants in a frame under glass, and then prick out into a sheltered piece of ground, in rows a foot apart and plants at least an inch apart in the row. Then we can get good plants. Or we may send to some plantsman and buy our supply of young seedlings, which are usually furnished very cheap. These are then treated as if we had grown them ourselves under glass.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

GRAFTING-KNIFE.

The cut shows a handy grafting-knife. It is not patented; any blacksmith can make one from an old file. It is 10½ inches long, including handle, which is 4 inches; the blade is 2¼ inches long and 1½ inches wide; the square point is 3½ inches long. The point is driven in the middle of the stem to keep open the clefts for inserting the grafts. A wooden mallet should be used.

J. H. MOHR.

INFLUENCE OF STOCK ON THE LIFE OF TREES.

BY PROF. J. L. BUDD.

A paper read before the Minnesota Horticultural Society.

In a very brief way I will only, at this time, call attention to the popular belief in the parts of Europe where horticulture was old long before America was discovered, which is, that all orchard fruits should be on their own roots or top, worked on indigenous wild stocks. What we know as root grafting has long been known but never practiced. Indeed, this belief at this time is being narrowed down by many experts to the exclusive use of trees on their own roots.

Recently the noted author of "Propagation and Improvement of Cultivated Plants," Mr. F. W. Burbridge, wrote these significant words: "Looking at grafting from all points of view, I am convinced that we should have had better fruit trees, and better and healthier and more prolific varieties in our gardens to-day, had grafting never been invented." Yet, when compared with the general writings of this gifted author, we find that he does not denounce the use of congenial hardy stocks. His sweeping statement was predicated on the fact that in Europe and America certain fruit stocks have come into general use which are not congenial to the varieties worked upon them, such as the use in this country, commercially, of French crab apple stocks, tender seedlings grown from scrub apples taken to the cider mills, French pear stocks, Myrobalan and St. Julian plum stocks and Mazzard and Mahaleb cherry stocks.

TREES FROM ROOT CUTTINGS.

Mr. Burbridge, Mr. Robinson and others, have called attention to the fact that in parts of France, Germany and Bohemia, North Silesia and Russia are found many sections where trees have been grown for the past one hundred years, from sprouts or root cuttings. In such places the trees are healthy, long-lived and fruitful. On the other hand, they call attention to the section in which grafting and commercial stocks has been long practiced, where varieties, once thought valuable, seem to be running out, and where disease and the attacks of the fungi are each year becoming more general. In such neighborhoods a change to trees grown from root cuttings would not be easy, for the reason that the material for root cuttings is lacking as with us. The inducement for a change of policy is less urgent with us, as the climate is more equable and the orchard troubles are trifling compared with ours.

If our people can only be convinced that trees grown from root cuttings are best, we can soon have an abundant stock of roots that will bring trees true to name. By the use of short roots and long scions we can cause the apple, pear, cherry, plum, prune and apricot to root from the scion in nursery, and when set in orchard the seedling part can be cut away. At Ames, Iowa, we now have many trees on their own roots and we are now starting trees in this way. The cuttings can be made and treated in the common way adopted with the blackberry and red raspberry; but with the orchard fruits the cuttings should be made four inches long and stuck like other cuttings, but with the top about three fourths of an inch below the earth's surface.

As the available material is yet scarce,

MONEY

can be earned at our NEW line of work, rapidly and honorably, by those of either sex, young or old, and in their own localities, wherever they live. Any one can do the work. Easy to learn. We furnish everything. We start you. No risk. You can devote your spare moments, or all your time to the work. This is an entirely new lead, and brings wonderful success to every worker. Beginners are earning from \$25 to \$50 per week and upwards. And more after a little experience. We can furnish you the employment and teach you FREE. No space to explain here. Full information FREE. TRUE & CO., AUGUSTA, MAINE.

we are now growing the cherry, plum *Rosa negosa* and other things under glass. In this way we can use short cuttings of smaller size, and secure an even growth with less than one per cent of loss.

The cuttings are planted thickly in rows: rows in boxes eighteen inches wide, six feet long and five inches deep. Holes are bored in the bottom for drainage. The bottom is covered with a layer of moss, which is covered with about three inches of common garden earth. The cuttings are stuck with the tops even with the surface and tightly packed. An inch of very rich earth is then sifted over the whole surface. The boxes are set away in the cellar until the middle of November, when they are set under the sashes not over one foot below the glass. At this date the plants are from one to three inches above the surface, and by the middle of May will run from six inches to a foot in height. Prior to the planting in the nursery, the plants are hardened by exposure to the air and scant watering. We put them out after the hurry of spring's work is over, selecting a cloudy day if possible. But last year we had no cloudy days at the proper time, yet we lost very few plants. Our hot-bed for this use is about forty feet in length, is covered with old hot-bed sash and is heated by hot-water pipes.

We use for the water heating, a very small burning conical boiler, made for laundries and parlor conservatories. It consumes very little coal, and has proven ample for heating the bed in the most extreme weather.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Prunello—Industry Gooseberry.—E. H., San Diego, Cal. The prunello is mostly prepared in your own state, though some may be imported from France, where it is called the "Petite prune." It is dried in four different grades and shipped from California east.—The industry gooseberry is quite free from mildew.

Mulching Dewberries.—A. D. C., Washington, Md. Dewberries should be mulched with straw like strawberries in the winter, and in the spring the vines should be lifted and the mulch be put under them to keep them off the ground. At the same time the vines should be shortened back about one third, unless they were summer pruned. It is always best to prune back a little in the growing season.

Dying Tree.—J. C. W., South Sudbury, Mass., writes: "There is a very large, old cherry tree standing on my lawn that begins to show signs of decay at the ground. The decay is fast creeping up the sides, and is of a solid, white formation, resembling toadstools, appearing occasionally around the base. With the exception of a large limb dying out now and then, the tree seems fairly healthy, although the fruit of late years has seldom fully ripened."

REPLY:—The tree is probably dying of old age, but its days may be prolonged, perhaps, by good care. If you remove all dead or dying limbs and spread a wagon-load of manure under and around the tree, you will probably have done all that is practicable to save it. If there is a very heavy turf around the tree, it would be benefited by its removal.

Killing Sprouts.—R. F. T., Appleton, Mo. If the sprouts are kept from growing for one season they will die out. If you feel that it would be too much labor to attend to them all summer, they may be allowed to grow until the middle of July, and from that time be cut close or plowed up. If cut at this time the roots will have no material stored up in them to start them into growth next spring, and so must die. Almost any bush cut in July will fail to sprout the following spring, for at this time the plant has used all the material (starch, gum, etc.) stored up the year previous to start growth, and is depending for its sustenance upon the material prepared from day to day in the leaves, and the leaves have not yet had a chance to get ahead of the actual daily needs of the plant, while a little later on there will have commenced a gradual storage of plant food in the wood and roots of the plant.

Aphis.—F. M. S., Coryville, Fla. The insect you refer to is probably an aphid or louse of some sort. The large bugs you speak of probably have nothing to do with the lice. These and all lice will generally succumb to an application of kerosene emulsion made as follows: Kerosene, 2 gallons, 67 per cent; common soap, ½ pound, and water, 1 gallon, 33 per cent. Heat the solution of soap and add it, boiling hot, to the kerosene. Churn the mixture by means of a force pump and spray nozzle for five or ten minutes. The emulsion, if perfect, forms a cream, which thickens on cooling, and should adhere to the surface of glass without oiliness. Dilute before using, one part of the emulsion with nine parts water. The above formula makes, when diluted, enough for thirty gallons of wash. It may be syringed over the branches and foliage; or the branches, if small and down low, may be dipped into a pail of the wash.

INSECTS ON FRUIT TREES

Can be destroyed by spraying with London Purple. Diseases of grape vines can be checked by spraying with Bordeaux mixture. The Field Force Pump Co., of Lockport, N. Y., manufacture the Knapsack Sprayer and a full line of Orchard and Vineyard Outfits. Write them for circulars and directions.

PLANTS Jersey, Yellow Nansmond Sweet Potato and Winningsstad, Sure Head, Bloomdale, Late Flat Dutch and Drumhead Cabbage, \$1.50 per 1, two in May, \$1 in June. F. Hurd, Swedesboro, N. J.

FARMERS LOOK HERE! Make your own fertilizers from the refuse of the farm. Far better than you buy, for ½ the cost. Easy to make, full directions for making 4 different kinds sent to any address for \$1.00. Address GEO. C. HORN, Lewisburg, Ohio.

JAPANESE INSECT DESTROYER

For the protection of Cabbage, Squash, Cucumbers, in fact all vegetation from destructive insects. Contains no poison. Price by mail 25c. Stamps accepted. Friend Medicine Co., Gresham, Neb.

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.



PLANTING POTATOES.—The impression is very general that the seed ends of tubers are not fit for planting. The eyes are so very close together that it is feared the result

of such planting would be a great number of weak stalks. This is a very great mistake. The seed end is the best part of the tuber for planting purposes. The sprouts issuing from there are the earliest and strongest, and they are not as numerous from that one point as most people would imagine. The first sprout is usually the only one from the immediate vicinity of the seed end, and it grows so strong and vigorously that the eyes next around it remain dormant. Nothing can be gained by cutting the seed end off and throwing it away. If I plant a whole tuber I leave the seed end on; if I plant half potatoes, I cut right through the seed and stem ends. I will not claim, however, that it makes a very great difference. In all my trials with seed-end halves and stem-end halves, the outcome in yield was nearly the same, indicating that there are no ironclad rules to be followed. It may be preferable to cut seed potatoes through the seed end, but if we cut the other way we will not be likely to lose a great deal by it.

EGG-PLANTS AND PEPPERS.—Most of these require a higher temperature in the hot-bed for germination than most other seeds. Tomatoes often come up very promptly and grow right along, while egg-plants and pepper seeds remain dormant until we have warm, clear days. Egg-plants, especially, should be started early; but we cannot well do it without good, strong bottom heat. When plants are once started, however, they should be given plenty of room and stimulated to continuous and vigorous growth. Old tomato cans come very handy for growing these plants in. No use in setting them in the open ground before the beginning of the warm season, and at that time the plants should be large—the larger the better, in fact.

TOMATOES FROM CUTTINGS.—A. J. D., of Birmingham, Alabama, has succeeded in growing tomatoes from cuttings taken off from plants that seemed to make an excessive number of shoots, and just stuck into the ground. About a dozen years ago I used to raise tomato plants quite largely from cuttings. The stock was obtained from nice, thrifty plants in the autumn, and propagated during winter in the greenhouse; or plants were raised from seed in January and cut up for propagation later on. The plants were exceedingly stocky, and I was always well pleased with them, especially since they seemed to give ripe fruit earlier than the plants as ordinarily grown from seed. On the other hand, the plants were undoubtedly dwarfed, and perhaps did not yield as big a crop as the others. Still, I yet think highly of this method of growing plants, especially for a very early crop; and if the soil is properly enriched, the results will hardly be otherwise but satisfactory. As a means of planting mishills in the potato fields, where the crop is grown extensively for canning purposes, cuttings come very handy. Whenever a mishill is found, cut off a good, strong shoot from one of the nearest plants and bury it up to the tip where the plant is wanted. It will seldom fail to grow.

CLOVER AS A MULCH AND FERTILIZER.

At a recent meeting of the Minnesota State Horticultural Society, the statement was made by Mr. Thayer, of Sparta, Wis., that green clover had proven a great blessing with him in raising small fruit. He has forty acres of small fruit and raises thirty acres of clover to use as a mulch for it. He cuts the clover as soon as it is in blossom and puts it around his bushes, about five inches deep. It keeps down the weeds, makes a valuable fertilizer and is a good material to help in protecting his fruit in winter. He covers all his blackberries and raspberries in the fall.

EXTRACTS FROM CORRESPONDENCE.

FROM INDIANA.—Davies county is a fine farming country. Hundreds of car-loads of watermelons are shipped from here every year. They are grown on a narrow strip running north and south on the west side of the county. The remainder of the county is mostly clay and is very fertile, raising large crops of corn and wheat. Dozens of coal banks give work for miners all the time. Land in this neighborhood ranges from seventy-five to one hundred and fifteen dollars per acre. A. D. C.

Washington, Ind.

FROM MISSOURI.—Shannon county is situated on the southern slope of the Ozark mountains. This is a good farming country. This county, as well as all southern Missouri, is well adapted to fruit culture and is fast coming to the front. Wild lands range from one to six dollars per acre. Improved farms can be bought for from three to ten dollars per acre. For stock raising, Shannon county is the place. We have fine range here and good nearly every year. If you want water-power, if you want a home cheap, if you want to live a long time and enjoy life, come to Shannon county. J. A. B.

Bartlett, Mo.

FROM WEST VIRGINIA.—Mercer county is situated in the north-western part of the state. It is bounded on the south by East River mountains, on the north by Flatop mountain. Bluestone river is the principal river in the county. It is a hilly country. Our mining towns furnish us a good market for everything we can raise. We get from twenty to thirty cents per pound for butter; from fifteen to twenty-five cents per dozen for eggs; one dollar and a half per bushel for potatoes; flour is from six to seven dollars per barrel; corn, one dollar per bushel. Our mining towns are Bramwell, Simmons Creek and Flipping. Bluefield is a flourishing town. It has between eight and nine thousand inhabitants. Concord, situated in the east end of the county, has a state normal school attended last year by over two hundred students. I don't recommend Mercer county for its rich soil or farming products. It is not a good country to farm in, as it is too rough for that. Land can be bought for from five to one hundred dollars per acre. I. H. B.

Littlesburg, W. Va.

FROM IOWA.—It is interesting to read the various letters and see how many live in the "garden spot." Do not most of them want to sell out and get into some other garden? It is also amusing to see how many theories are advocated to better the condition of the masses. Equal taxation should be the rule and practice, but will not be until men and women become less selfish and more honest. The standard of honesty is a movable scale. Many who would feel disgraced to steal a horse, can steal timber without conscience disturbing them. The rich ones who think a poor debtor should conceal nothing from his creditors, will conceal all they possibly can from the assessor, thereby throwing their share of taxes on others less able. How many are honest enough to pay car fare if the conductor should neglect to collect or fail to take their ticket, so they might ride twice on one pay. The cry for more pay and less hours among workmen, means more hours and less pay for farmers and their wives. The demand for more money per capita, and down with the banks, is a wild, fanatical idea. Money, like water, is plentiful enough, but the trouble is to get it equally distributed. It is the scarcest where needed most. The ocean is always full whilst the deserts suffer. Money in the city, where a dollar can change hands one thousand times a day, is not needed so much as in the country where it has to move slower from hand to hand. The trouble is, when we do have a shower our dishes are wrong side up or in a leaky condition. Until the millennium is here, each one must prepare his own sails to catch the favorable breeze and get into a safe harbor, or be swamped by every financial storm. We need not expect relief from laws until people are willing to obey the gospel and do as they would be done by. J. W. B.

Wells, Iowa.

FROM MISSOURI.—This is not the best county in the best state in the Union. It is only one of the best counties in south-western Missouri, and said state only ranks fifth in population, with corresponding rank in wealth, morality, intelligence, progress, enterprise, etc., but by the cold, hard facts of the census takers, we are far ahead of the state whose citizens, in writing for your columns, always claim first place. Missouri now ranks next to Ohio in population and political importance, and when boasted attempts to belittle our state or claim greater achievements, natural advantages or acquisitions, we have only to meet them with the relentless, unimpeachable figures furnished by the regularly appointed and qualified compilers of statistics lately employed by the general government to ascertain the bottom facts. I have noticed, sometimes, that among the generally honest and truthful correspondents, who write the facts as they appear to them about the several localities, the professional land boomer gets in his fine work. One, I noticed, had a fling at Illinois,

"La Grippe" and Pneumonia.

Prevention Better than Cure.

Reports from medical sources show that "la grippe" is again prevalent, and in connection with its return it is important to note that a decided increase of mortality from pneumonia is recorded.

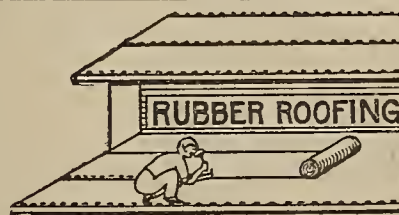
This should be a warning to all classes to take precautions against exposure and whatever tends to debilitate the system.

The trying changes of the weather, at this season, and the consequent cases of colds, influenzas, inflammation of the lungs, rheumatism, pains in the back, and the many other aches and pains caused by unavoidable or careless exposure, are things that cannot be neglected except at the risk of more serious consequences.

As attested by indisputable testimony, they may be both prevented and relieved by the timely use of

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SAMPLE FREE IF YOU SEND STAMP.

Write at Once. Indiana Paint and Roofing Co., New York.

the state that has just invited Ohio to step behind her in a quiet but conclusive manner, from which there is no appeal. When I first quit that great state for the West, I used to read the glowing accounts of the very best state in the Union, with more interest than I do at present. Fine descriptions of the green grass growing as far as the eye can reach, with school-houses on every hillside, birds singing and people going regularly to church, and all that bosh can and has been written about land too rocky to plow and full of alkali and hardpan spots, buffalo wallows, etc. The "white school-house," too, in most instances, represents bonded indebtedness in the districts which newcomers will have to help pay if they buy land. In fact, I can name a few instances where the extravagance and dishonesty of school directors have caused men to lose their farms. Impossible! you will say. Not so. I can tell you just how it is done. In a new settlement where nearly all the people in a district are homesteaders, little or no taxes are paid, two hundred dollars exemption being allowed householders, and that sum is generally sufficient to include stock, implements, etc. But let one or two tenderfoot newcomers arrive and buy land outright and deed it, and immediately their non tax-paying neighbors conclude that a school-house is an absolute necessity, and they will vote the bonds to build the school-house and assess the means to run the school on the one or two owners of land, who have not been so shrewd as they are in holding land as homesteads as long as possible. Where is there a county that does not have miles of pure air overhead? And who, of all these braggarts about immense fortunes to be made in these far-away states, can show a better profit per acre than Joseph has shown can be made from the unpoetic onion? No going a thousand miles to try that experiment. No limitation to a short season, expense of boxing and transportation and an uncertain market. Or take celery, asparagus, horse-radish, small fruits or almost anything else that is in good demand, and constant demand too, and compare with the best figures these professional boomers show, and you will find it easy to match them at home, without the expense of travel or years of waiting. People who go west to better their fortunes will succeed when the conditions are favorable, but they will miss their old friends and neighbors, and they will be almost certain to meet plenty of people who live by swindling the inexperienced. Nearly all they come in contact with will be quite ready to beat them in a trade whenever they can. Alberta, Mo. A. G. S.

A PRESENT FOR BUTTER MAKERS.

We have received an account book printed especially for dairymen, with columns for amount of milk, pounds of butter churned, to whom sold, etc., for each day in the year. It also contains valuable breeders tables, rules for making gilt-edged butter, and other interesting matter. Wells, Richardson & Co., Burlington, Vt., have kindly offered to mail a copy free to any of our readers who sends a stamp for postage.

In connection with this we would say that Wells, Richardson & Co.'s Improved Butter Color is thoroughly reliable and one that we can recommend to all dairymen. From a letter recently written by Mrs. H. P. Dunham, Lenexa, Kansas, we quote: "Several of my neighbors said they would not use anything to color their butter, but when they had to sell for several cents a pound less than I was getting, they changed their minds and now are using what I do, Wells, Richardson & Co.'s Improved Butter Color."

FROM OREGON.—School land is selling in Coos county at \$1.25 per acre. Potatoes sell at 1½ cents per pound; chickens at from \$5 to \$6 per dozen; eggs, from 20 to 25 cents per dozen; dried fruits, from 12½ to 18 cents per pound; flour, from \$5 to \$5.50 per barrel. New settlers arrive nearly every week. Week before last a sperm whale washed on shore at the life-saving station at the mouth of the bay. The keeper of the station got over \$1,000 worth of spermaceti from its head. It was over ninety feet long and over ten feet high as it lay. South-western Oregon is the best place for eastern immigrants to come to for health, as well as wealth. There is an abundance of clams, cohoes and crabs. An eastern capitalist, or man of money, could do well in establishing a cannery for canning shell fish. Some salmon are now running. Wages in saw-mills are from \$30 to \$35 per month and board for common laborers. Marshfield, Oregon. W. T. C.

PATENTS

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COMFORT PUB. CO., Box 993 Augusta, Maine.

Our Fireside.

"IF I COULD SEE HIM AGAIN."

If I could see him again,
If I could hear him say,
Merry and kind as he used to do:
"Well, little wife, what has come to you
All through the busy day,
While I have been away?"

Often then I was cross;
Often I used to reply:
"What comes to a woman everywhere?
Washing and baking and household care;
I declare it makes me cry
To think how my days go by!"

Then he would kiss me again,
Try to be still more kind;
Tenderly say: "My poor little wife!
Would I could give you an easier life!"
How could I be so unkind?
Oh, how could I be so blind?

God took him away one day,
Took him away from me;
Now, though I labor the whole day through,
Nobody asks: "What has come to you?"
Nobody pities or shares
The weight of my household cares.

Oh, yes, I have children, too;
A mother cannot complain;
But never a son nor a daughter's grace
Can fill the void of their father's place.
A mother cannot complain;
But, oh, for my husband again!

If I had only known
That I should ever find
It was an angel love that for years
Worked for me, cared for me, dried my tears,
I had been far less blind;
But, oh, I was blind, so blind!

—Lillie E. Barr, in Ledger.

"He said a great deal about him, grand-mamma," said Esther impatiently. "It is impossible for me to remember all. Naturally, he praised him; he is very fond and proud of him, and I could see he wanted to know how other people regarded him and what they thought of his talent."

"Did you praise him?"

"I always try to tell the truth, grandmamma, and doing that in his case was praise enough;" and Esther rose to leave the room.

"Are you going out for any definite purpose this morning?"

"I was intending to buy a bit of ribbon. I want a walk, and I may drop into Aunt Florence's on my return."

Madam Reignold was much stirred by what she had heard. At one moment she regretted having let Esther go out the day before, and at the next she told herself that the girl would be likely to hear what she had heard, at some future time and place. In speaking of Mr. Alton, she did not add that that gentleman and herself had had a long talk, in which she had confided to him her dread of Esther developing a romantic regard for the artist, and that Mr. Alton had advised her not to reveal this dread nor unduly check the girl in the matter of seeing or speaking with him; finally, he advised her to let Esther go that day with her aunt, and he would accompany, watch over and report. But the circumspect behavior of both young people left him nothing to report. This, together with a full account of his own feelings and intentions toward Esther, Madam Reignold had received by that morning's mail. And the space occupied by his own affairs accounted, doubtless, for no mention being made of the elder Cazenove's arrival.

Esther went into Hollander's

Esther passed on like one in a dream. The more lantern rays that were flashed upon her grandmother's character, the more puzzled she felt. To associate early love with her, to believe that her grandmother ever had faith or fancy or aspirations like herself or other young people, was something she could not bring before her mental vision any more than she could the daily life of the ancient Puritans.

Mechanically she turned into the Public Garden—the way led to her Aunt Florence's—wandered along by the meandering walks, felt a vague delight in the brilliant bloom of the hyacinth and tulip beds and the wafted fragrance of pansies. She followed the path by the edge of the pond till she came to the steps leading up to the bridge that crossed it, when a voice said:

"Esther—I beg pardon, Miss Wynn—this is an unexpected pleasure."

"And you, Mr. Cazenove, what are you doing here?" she asked. She was taken so unawares that she started violently as she spoke.

This Cazenove assumed not to see, and answered lightly: "Hush! Speak low; tell it not in Gath. I am practicing amateur photography with a detective camera."

"Why?"

"Oh, to get sudden, subtle effects. This is a backward season. The trees pulsate in growing yet. I want to get reminders of their motions. Besides, when odd-looking people pass, or people who strike peculiar attitudes, this is a good way to memorize them for future use."

"Do you catch moods unawares, too? In

my condition in life is somewhat more definite and secure than your father's," said Cazenove with a proud smile.

"Pray, do not mention my father," cried the girl, throwing her head back with dignity. "He committed what seems to be the unpardonable sin of winning a woman's love without mercenary calculation. Let him rest in the obscure grave he somewhere occupies."

"I humbly crave your pardon. I meant no offense," he said.

"Good morning, Miss Wynn. Good morning, Mr. Cazenove," said a voice from the bridge above; and looking up, they saw Mr. Alton walking briskly.

"Good morning, Mr. Alton. You, like ourselves—who have this moment met—seem to be lured out of doors by the balmy coolness of this May morning," said Cazenove, with an air of indifference.

"Not precisely. I am facing State street and business, as I do in all weathers," answered Mr. Alton, passing on.

"Ah," said Esther, recovering herself, "there goes my detective camera. Before night my grandmother will have heard of this meeting, with embellishments."

"I think not," said Cazenove. "The man is a bit of a bore and a good deal of a prig, but he is a gentleman, withal."

"You are not offended with me?" he asked, as Esther passed him up the steps.

"I shall never be that," she answered. "Only I have made a mistake to let you speak as you have."

CHAPTER IX.

Esther did not go to her aunt's that morning, as she had intended. She went immediately home, lunched and retired to her own chamber. Late in the afternoon her grandmother's French maid sought her, bearing Mr. Alton's card upon a salver. Esther did not keep him waiting.

Mr. Alton was scrupulously attired, and kept his hat decorously in one hand, while he held out the other to her.

"Miss Wynn," he began, after she was seated, "Madam Reignold has done me the honor to hold me in esteem for many years, and with her cordial consent and best wishes I come to you now on a delicate and important mission—the most important of my life. I have been interested in you since I first saw you. I have watched your growth in all desirable accomplishments. From a practical point I know of no young lady I admire more, and you are the only one I love. I come to ask you to be my wife. I do not wish to hurry your decision or force your inclination. I give you all the time you may ask. I need not speak of myself; you know what I am, how I stand in the community, and that I do not come to you with empty hands. Esther, I can surround you with every material comfort, and it will be my delight and happiness to do so."

Esther did not speak at once; she was struggling to frame a refusal that would not sound harsh or cold. The man's evident earnestness touched her.

"I am afraid I have spoken prematurely," he continued; "but events, or rather appearances, have driven me to act more impulsively than is usual with me. I urge nothing more at present than a favorable consideration of my suit."

Esther's face was full of emotion as she turned it towards him and said:

"Mr. Alton, I want to be very frank with you, because I respect you very much—so much that I wish it were in my power to give you the sort of answer you expect. But I cannot. The feeling I have for you is as different as possible from that you ask for and desire, and I see no possibility that it can ever be otherwise."

"When a woman is sure that her feelings can never change, it can mean but one thing—she loves another," said Mr. Alton, and then added: "It is as I feared."

"Mr. Alton, I will not confirm your supposition. I have never yet confessed what you say, not even to myself," she answered.

"Then you will let me hope?" he asked, eagerly.

"I cannot; it would be useless," she said. He arose to go.

"Mr. Alton," she called, and then hesitated. He turned and looked at her, kindly, she thought. "Mr. Alton," she continued, "ac-



KEPT HIS HAT IN ONE HAND AND HELD OUT THE OTHER.

SISTERS, BUT NO KIN.

BY MARY TWOMBLY.

CHAPTER VIII.

MADAM REIGNOLD questioned her granddaughter very closely regarding the little house-warming affair at Cazenove's studio.

"Did it occur to you as at all odd that I let you go there, Esther?"

"Not at all odd, but very good of you, grandmamma," answered Esther.

"I did not approve of it. When Florence first spoke of your going with her, I refused decidedly. Just after that, however, Mr. Alton came in and told me he was going. That and a few other remarks he made, caused me to change my mind and let you go."

"I am very much indebted to Mr. Alton, for I had a lovely time," said Esther.

"Mr. Alton is unexceptionable in every way, an excellent man; I know no one his superior."

Esther did not reply to this.

"Now, tell me who else was there," continued her grandmother.

Esther ran through the list and ended with the elder Mr. Cazenove. The effect upon her grandmother was electrical.

"What! Rignald Cazenove here in town? You are sure, you actually spoke with him, Esther?" she exclaimed, rising, and then sat down again.

"Why, yes, grandmamma. I talked with him quite a while. A nice old gentleman, so kindly and mellow in manners. Why are you so agitated?"

"Because I used to know him very well in my youth, and he has been so out of the thought and hearing of everybody for years, that I have—well, if he ever came to mind, it was as one thinks of the dead."

"He is very much alive, I assure you; a polished, courtly old gentleman."

"He was always that," said Madam Reignold, as if speaking to herself.

"And he is not so very aged, either, considering he is Mr. Cazenove's granduncle. He looks no more than your age, grandmamma."

"He is but two or three years my senior and was the youngest of his family. What did he say to you, Esther?"

"When we were alone he talked chiefly about my mother and father. He inquired about your health, and he talked of Mr. Cazenove—Harry, as he always calls him. He is the first person I have met who seems willing to talk to me about my parents. He says I am in looks my mother over again, and my father he describes as a handsome, interesting fellow."

"Does he think there is a possibility of his being alive?"

"No, he feels quite sure he is dead long ago."

"Ah!" ejaculated the old lady with a long sigh of relief, which made Esther fix her eyes upon her till the old lady grew nervous.

"What did he say of his nephew?" was her next inquiry.

and made a few dainty purchases. On coming out, several carriages stood around the door, and before one of them a clerk was holding some goods for the inspection of an ancient dame who did not wish to take the trouble to go inside. Esther was preoccupied and did not even look to see who the occupant was, but the latter espied her.

"Miss Wynn," she called; then to the clerk, "That will do. You may send home two or three pieces, and I will select from them. Won't you come in, my dear, and let me drive you wherever you are going?"

"Thank you, Mrs. Burroughs, I have several calls to make," said Esther.

"I have wanted so much," continued the garrulous old dame, "to go in and see your grandmother. I want to talk with her about Rignald Cazenove's arrival home. What an immense surprise it must be to her."

"Yes, she seemed very much surprised when I told her this morning."

"Didn't she know it before? He has been here three or four days. I've so wondered if he had called. They were such a pair of lovers in their youth."

"Lovers!" echoed Esther, in a tone that made the statuesque coachman turn.

"Dear, dear, what am I thinking of?" I might have known you would not have heard it. An affair that happened in my own youth, and nearly everyone dead that knew of it. Old people, my dear, are always forgetting who they are talking to and fancying that young people must know of things that happened a couple of generations before they were born."

that case you frighten me. I would not care to be immortalized in my present one."

"I knew something had happened the moment I saw you," he said, "but I did not want to be the first to speak. Will you tell me?"

"There is nothing to tell; at least, nothing tangible," she answered. "It is all in myself. I am not in a happy temperament, I fear. I felt very happy yesterday; to-day I feel like a caged bird that wants to be free."

There was an expression in Cazenove's eyes before which Esther shrank as she looked up. They revealed so much that she dreaded he might speak. She tried to take refuge in some commonplace remark, but he anticipated her.

"It is wretched," he said, "for two people to have so much to say to each other as you and I have, and yet act like a pair of culprits, afraid to speak what naturally rises to the lips."

"Mr. Cazenove, pray do not say more," she pleaded.

"I must, Esther. I must not let you think it is the will of a feeble and tyrannical old woman restrains me. If I had the means to secure you a life of ease, I would face her and laugh to scorn her fantastic demands and pretensions, while I paid her the outward respect of asking her for your hand. But it will come to that yet."

"Do not say that. I hope not—"

"Hope not—what?"

"There have been tragedies enough in my family. I mean that while reason remains with me, I will never do anything to add to them. I would rather die as I am."

"You mean your mother's case. That was exceptional. I am a poor man, Esther, but

FOR CATARRH
boils,
pimples, eczema, and
loss of appetite,
take that sure
specific,
Ayer's Sarsaparilla
Cures others, will cure you

according to appearances, I am in an enviable position. My grandmother is extremely fond of me. I have all and more than I want, and yet I am wofully alone and lonesome often. You will not say or do anything to make it harder for me because—because I have dealt with you truthfully?" she said.

"I am sorry you think it necessary to make that appeal to me, though it proves you trust me," he said. He had pulled the bell on leaving his chair, and now a servant appeared. "Tell Madam Reingold I would like to see her," he said.

Esther flew to her own room. She felt extremely agitated. She dreaded to meet her grandmother, yet felt silence and solitude insupportable. Hurrying on her street wraps, she hurried out of the house while Mr. Alton was still in conference with her grandmother, sought her Aunt Florence, and throwing herself upon that lady's neck, told her all. Mrs. "Bob" had seldom in her life listened to a love story in so serious a mood.

"Don't be so unhappy about it, my dear," she said, "you have done perfectly right; you could not have done differently from what you did. I am almost sorry you could not have cared for Mr. Alton; he is such a safe man; so trustworthy. On the other hand, I cannot understand his ever enchanting a woman, producing any illusion."

"I never came so near liking him in my life. He took all I said so sensibly, so like a gentleman," said Esther. "I found myself wondering if girls ever suddenly changed their minds, and married men on just such feelings as I had for him that moment."

"Yes, they have, and regretted it ever after. There have been cases where it turned out very well, and love came after marriage, but it is an extremely risky experiment. Marriage at best is a risk, my dear, and needs all the love you can bring into it. Now, tell me, aren't you just a trifle vexed with Mr. Cazenove?"

"I felt a little hurt at his reference to my father. But I suppose he hardly realized how sensitive I was."

"Yes, and you do not realize how sensitive he is about considerations that you do not weigh at all. The Cazenoves, my dear, were high up when many people who reign to-day were away down. To-day, Cazenove is almost entirely dependent upon his brush. But his uncle is likely to make all that right, I fancy."

"How?" asked Esther. "Is he rich?"

"How rich I don't know, but I feel prophetic about him. I feel sure he will yet call on Madam Reingold. Oh, how I would enjoy being an unobserved witness of that meeting!" And Madam Reingold's daughter-in-law laughed gleefully.

"How singular that she should ever have been in love with him."

"I am not sure that she ever was. I am not sure that your honored grandmother ever was in love, Esther. If so, no woman ever had a more accommodating memory. How I would enjoy seeing that old poplar shaken to its foundation."

"Aunt Florence!"

"Oh, but I would," continued Mrs. "Bob," laughing. "There is little doubt but he was in love with her. They say he was for a time nearly distracted. But despite that, he some years later married a South American woman."

"Indeed! Then he is a widower?"

"Yes."

"Without children?"

"Without any living. My dear, it seems a visible evidence that love can be lived down, as all the sages tell us. The question is whether it is best to live up to it and enjoy all it has to give, even if its promise turns out illusive."

Esther mused awhile.

"I do not want to interrupt your reveries, especially if they be pleasant, but I have another bit of news to communicate," said her aunt, presently. "It is about Almeda."

"Almeda? I quite forgot her," said Esther.

"Naturally, and you will do so practically in a very short time. She leaves us to-day."

"Leaves us?"

"Yes. She has been with us now about ten days, and from the second day I knew she was a hopeless subject. But I concided to let her stay beyond the week specified, and let her make discoveries for herself. She is bright enough in some ways, but I am convinced she never will discover the plane she occupies naturally. After breakfast this morning I made her understand this as delicately as possible, and intimated that her visiting time had expired. She took high dudgeon on the instant, and told me she would go at once. She has packed everything, went out, returned just before you came, and is now upstairs."

"Oh, Aunt Florence, I am so sorry for her. Does it strike you at all as cruel?"

"No; it merely annoys me a little. I am only acting with scientific consistency and obeying a law of nature. The girl belongs in the sphere she occupied; she does not belong in ours, and it is too arduous a task to try to naturalize or ingraft her. Had she gravitated naturally into place here, I would have done all in my power for her. I have no snobbishness, as you know. I let nature decide about people, and then I aid her."

"But the cruelty was in bringing her here."

"How else should I know about her? How else could she have a chance to learn about herself; to wake up to a perception of where she naturally belonged?"

"Oh, Aunt Florence, you are incorrigible! I

do believe that you are kind-hearted, that you mean well, but you have never had personal trials, vain strivings, blind longing; everything came to you like a ripe plum that you had only to reach up and pluck. I must find Almeda."

She found Almeda seated, hastily writing with a lead pencil on a sheet of paper in her lap. Her street wraps were on, and all her belongings neatly packed in the trunk she had brought with her. On sight of Esther she jumped up and let the things fall out of her lap. She was greatly excited.

"There!" she cried. "I do know as I was ever gladder to see you in my life. I was writin' you that letter to tell you all about what I am going to do and where you could find me—in case you ever wanted me. 'Tain't easy for me to write a letter, and I can say a lot more talking. The cold-blooded wretch! To tell me in that p'ltie way o' hers to leave her house; that my time was up—no more concern than if I was one o' them hired girls she had come for a week on trial—after askin' me here herself 'thout rhyme or reason, an' me never hearin' o' her in my life till she sent for me! The purrin' cat! The snake in the grass! Oh, I would like to slap her face an' stamp on her!"

"Almeda, dear, you don't know what you are saying."

"Yes I do, too, and mean it."

"Where are you going, tell me? Isn't it too late to take the train home?"

"Yes. I ain't goin' home. I wouldn't let my folks see that I'd go home now. I'd rather let them see that I could earn my own livin'. I've been out and down to Mandy Hodgkins' and told her. She's got a place for me in her shop, and I'm goin' to room with her where she boards. Here's the address."

Esther glanced at the card. "It isn't a very inviting locality, I fear," said Esther.

"Of course it isn't. The minut I seen it I thought o' that song in Pinafore where the girl goin' to marry the sailor talks o' the neighborhood where clothes hung out all day a-dryin'," said Almeda, not without a grain of humor running through all her anger and chagrin.

"What does Miss Hodgkins work at?" asked Esther?

"Stitching shoes," said Almeda, laconically; and the information conveyed no definite idea to Esther.

"You needn't say anything about the difference I'll find between this palace and where I'm going to; I know all about it. But it's like enough I'll fall in with some people that's folksy and human—what they never was in this house," said Almeda. "There's her stuff that she give me lyin' there on the bed; I'll never wear a thing that come from her. I'll be glad to see you, of course, Esther, if it don't shock ye too much to come among poor folks again; but I'd rather you wouldn't come for a week or so, anyway, till I get settled."

"Can't I do or say anything to persuade you to go home to your father and mother first, Almeda? You owe it to the people that brought you here that they return you home safely again. Whatever you want to do later is another thing."

"Much I care for what's due to her that brought me here. No, I'll go and work my own way, and I ain't done with her yet. I ain't done with any of ye. I tell ye, Esther, it is borne in upon me that I'll get up in life as high as any of ye yet, and I'll get there by my own exertions, too. Wait and see. You mark my words."

With which parting salute Almeda flew out of the room, the carriage to take her away having arrived. She flung a parting kiss to Esther, and without a look for any one else, settled herself back in the vehicle as it drove away.

More than a week passed and Esther was making up her mind to call on Almeda, now the limited time had expired. Not a day passed but she had thought of her, and the memory lay sore upon her conscience. Before she could act upon her wish the morning mail brought her the following note:

DEAR SISTER ESTHER:—I have left Boston and am here in Oldport, where I was born. Shoe stitching in the Hub did not agree with my health or tastes. The girls working at it were all too far below me to associate with, 'cept Mandy Hodgkins and one or two others. I had a chance to come here, and I came. The girls are really superior here. People know me, and I am as good as anybody. So here I stay for the present, until better luck comes. I know it will come some day. Yours sincerely, ALMEDA POORE.

P. S.—Horace Stanwood has been down here lots o' times, but I haven't settled his suit yet. The more I see of others the better I like him. But maybe there is some one in the world that would suit me better, and if there is I am waiting to meet him. ALMEDA.

[To be continued.]

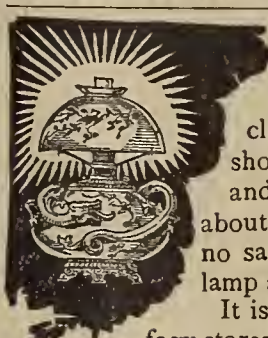
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Packed and delivered at depot for \$9.00 cash.



The Pittsburgh Lamp is one that almost keeps itself clean. If it were shown to every buyer and the truth told about it, there would be no sale for any other lamp at from \$2.50 up. It is new, and the old-fogy stores haven't got it yet. Send for a primer.

Pittsburgh, Pa. PITTSBURGH BRASS CO.

MENTION THIS PAPER WHEN ANSWERING ADVERTISEMENTS.

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THE GREAT HEALTH DRINK.
Package makes 6 gallons. Delicious, sparkling, and appetizing. Sold by all dealers. FREE A beautiful Picture Book and cards sent to any one addressing C. E. HIRES & CO., Philadelphia.

440 CONKLIN'S
A \$10 BOOK FOR 25c.
Conklin's Handy Manual of Useful Information and World's Atlas contains the cream of a whole library; a marvel of completeness. Edition of 1891 contains complete official census of 1890, population of every State and Territory, also of all cities of 5000 or over in 1890, 1880 and 1870, the McKinley Bill, new Copyright Law, Appropriations of Congress, complete political information, valuable points of law for every day use, best records to date in all kinds of sports, besides information on 2000 subjects of value to everyone. The volume has 50 full-page maps in color, with a description of every country in the world. Over 1,500,000 copies sold. A Golden Harvest for Agents. Edition of 1891 selling like wild-fire. Agents making \$5 to \$15 a day. Send 25c. for agent's terms and copy bound in limp cloth or 50c. copy in library style. LARSEN & LEE, 208 Wabash Ave., CHICAGO, ILL. Mention where you saw this advertisement.

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OF PURE COD LIVER OIL WITH Hypophosphites of Lime & Soda
IS NOTHING UNUSUAL. THIS FEAT HAS BEEN PERFORMED OVER AND OVER AGAIN. PALATABLE AS MILK. ENDORSED BY PHYSICIANS. SOLD BY ALL DRUGGISTS. AVOID SUBSTITUTIONS AND IMITATIONS.

14K GOLD!
AND SOLID GERMAN SILVER.
The cases are made of a plate of fine 14k gold over the finest quality of German silver, making a case composed of nothing but fine gold covering finest quality of German silver. With German silver on the inside and 14k gold on the outside, we warrant this case to be equal in appearance to a \$50 solid 14k gold watch. They are open face, smooth basins, finished to dazzling brightness, dust and damp proof and warranted to wear a life time. Different from the cheap brass watches offered, the case contains nothing but gold and the finest quality of German silver, and in fact it is in every way as good as a \$50 solid gold watch. The movement is a fine 3-4 plate style, finely jeweled polished pignon, oil tempered mainspring which does not break, and all the latest improvements. A guarantee is sent with each watch that it will keep accurate time for 2 years ordinary use. **OUR 90 DAY OFFER.** That all may have this beautiful watch in their own hands, and fully examine and see for themselves the value and running qualities of same, we will send it C. O. D. to your express office, with the privilege to examine it. All we ask is any business man in your city as reference that you can pay the express agent \$2.98, or when full amount is sent with order we give a fine gold plated chain and charm free. If not satisfactory you can refuse same and you are nothing out but your time in going to the express office. Knowing the fine qualities of this watch we make the above offer, as anyone wanting a good time piece will be advanced. Address **WILLIAMS & CO., 125 S. Halsted St., Chicago, Illinois** Mention this paper when you write.

If afflicted with sore eyes use **Dr. Thompson's Eye-Water**
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OR we give this Set as a Premium to those who get up a Club of \$20.00 for our Teas Spices and Extracts. We are Importers of Tea Coffee and Crockery, and sell direct to Consumers. We want YOU to send for our 120-page Price and Premium List. It tells the whole story. Costs you nothing. Will interest and pay you. We have hundreds of other sets, Plain and Decorated.

THE LONDON TEA COMPANY,
795 Washington Street, Boston.

DO YOU LIKE ICE CREAM?
YOU CAN HAVE IT AS OFTEN AS YOU WISH IT AND MAKE IT BETTER AND CHEAPER THAN YOU CAN BUY IT—IF YOU USE

YOU HAVE LOTS OF ICE THIS YEAR, AND THE CREAM; ALL YOU NEED NOW, IN ORDER TO GET THE BEST RESULTS, IS

DO NOT BE IMPOSED UPON BY DEALERS WHO MAY TRY TO SELL YOU OTHER FREEZERS BY TELLING YOU THEY ARE "JUST AS GOOD" OR "JUST THE SAME AS THE GEM."

YOU WANT THE BEST, THE MOST CONVENIENT AND ECONOMICAL, INSIST ON HAVING THE GEM AND SEE THAT IT IS LABELED IN RED AS IN CUT ABOVE.

DAINTY DISHES FOR ALL THE YEAR ROUND, BY MRS. S. T. ROBER, CONT'G RECIPES FOR 120 ICE CREAMS, ETC., PACKED IN EACH FREEZER. SAMPLE COPY MAILED FOR 8 CTS., IF NAME OF THIS PAPER IS GIVEN.

AMERICAN MACHINE CO.,
LEHIGH AVENUE AND AMERICAN ST., PHILADELPHIA.

SOLE BY LEADING HARDWARE AND HOUSE FURNISHING STORES EVERYWHERE. Don't fail to mention this paper.

A BIG OFFER
50c. MADE IN A MINUTE! If you will hand up in the P. O., or some public place, the two show bills that we send, we will give you a 50c. cert., and send it in advance with samples and bills. This will trouble you about one minute, and then if you want to work on salary at \$50 or \$100 per month, let us know. We pay in advance. **GIANT OXIE CO., 21 Willow St., Augusta, Me.**

\$20 HIGH PHILA. SINGER
Automatic Bobbin Winder. 15 Days' Trial. Warranted 5 years. Self-setting needle, self-threading shuttle. Light-running and noiseless. All attachments. Send **THE C. A. WOOD CO.,** for free 17 N. 10th St., Phila., Pa., circular. Mention this paper when you write.

FREE THE NEW AMERICAN MUSICAL BOX
100 TUNES
To introduce them, one in every County or town furnished reliable persons (with ref.) who will promise to show it EXCELSIOR MUSIC BOX CO., P. O. Box 2126, N. Y. City. Mention this paper when you write.

GENERAL AGENT WANTED
AGENTS are making FROM \$75 TO \$150 PER MONTH. **FARMERS MAKE \$200 TO \$500 DURING THE WINTER**
LADIES have great success selling this Washer. Retail price only \$5. Sample to those desiring an agency \$2. Also the Celebrated **KEYSTONE WRINGERS** at manufacturers' lowest prices. We invite the strictest investigation. Send your address on a postal card for further particulars. **LOVELL WASHER CO., 101 Huron St. ERIE, PA.** Always mention this paper.

IT'S FREE
to examine. Cut this ad. out and send to us and we will send this watch by express (all charges paid). You can examine and test it thoroughly, and if you do not find it equal to any watch retailed at \$25.00, exactly as represented, and far superior to any watch advertised in papers, and worth three times as much as the watches so extensively advertised under various names at from \$4.00 to \$10.00, YOU NEED NOT PAY ONE CENT, otherwise, after examination, you pay the express agent \$5.98 and take the watch. Case is full-gut steel, hunting style, WARRANTED 15 YEARS. OLD PLATED, beautifully engraved, decorated, stem-wind and stem-set, movement is AMERICAN style, quick train (18,000 beats per hour), solid nickel, richly jeweled, accurately regulated and adjusted and fully warranted. Order now, this ad. may never appear again. Address **ROEBUCK & CO., Minneapolis, Minn.** Mention Farm and Fireside when you write.

WATCH WHEN THE DOG COMES OUT.
This Weather Warning will faithfully forecast the weather for the ensuing 24 hours, so that you can get your own weather report without waiting for the newspapers to tell you what the weather report is to be. It is a cyclone warning. When the weather is going to be wet, a fine noble dog arises from his kennel back in the distance, and approaches the opening (see illustration above), giving a signal that there is a storm approaching, and as the storm subsides, or if it will be over during the next 24 hours, a butterfly in all its splendor appears to tell you that sunshine is at hand, to gladden the hearts of mankind. The butterfly and the dog are made of metal in handsome colors. The front is handsomely decorated with fancy designs and figures. In the centre stands an accurate thermometer, the whole thing being so simple that a child will understand it at once. When the devastating hurricane, cyclone and wind storms are approaching your home, this machine warns you long ahead, giving you time to prepare. It is a wonderful machine, and will save your life and many a dollar besides. It tells you whether you had better take your umbrella with you to-day. It tells a lady the weather, and she will know the most suitable dress to wear, etc. Enclose 50 cents to **Morse & Co., Box 897, Augusta, Me.** Mention this paper when you write.

Our Household.

IN THAT OL' TOBACKER PATCH.

BY S. Q. LAPIUS.

I jes kind o' feel so lonesome that I don't know what to do,
When I think about them days we used to spend
A hoein' out tobacker in th' clearin'—me an' you—
An' a wishin' that the day was at an end.
For the dewdrops was a sparklin' on the beeches' tender leaves
As we started out a workin' in th' morn;
An' th' noonday sun was seudin' down a shower o' burnin' sheaves,
When we heard the welcome-soundin' dinner-horn;
An' the shadders 'round us gathered in a sort o' ghostly batch,
'Fore we started home from workin' in that ol' tobacker patch.

With th' hoein' an' th' toppin' all th' summer days we spent,
While th' fleecy clouds was floatin' overhead;
An' we sometimes stopped to lazy, with the tree-tops for a tent,
An' we stretched out with th' mosses for a bed.
Then we'd talk about th' city, with its glitter an' its noise,
An' we'd wonder if th' time 'ud ever be
When we'd be livin' in it an' partakin' of its joys,
An' be as rich as Cræsus—yon an' me.
But th' fox-tail grass was growin' 'twixt th' rows as thick as thatch,
So we had to keep a hoein' in that ol' tobacker patch.

When th' sultry days was over an' th' fall had come at last,
An' th' strippin' an' th' stringin' was at hand,
When th' maple leaves was fallin' an' a rustlin' in th' blast,
An' th' corn was golden-yeller in th' land;
Then we'd start th' roarin' fires in th' yawnin', mud-dobbed flues,
That peeked out neath th' dry-house made o' logs;
An' we'd sit there in th' night-time, watch th' firelight's changin' hues,
An' listen to th' barkin' o' th' dogs.
Then you'd tell o' bears an' taggers, how they'd growl an' scratch.
Golly, how it made me shiver in that ol' tobacker patch.

I'm a feelin' mighty lonesome, as I look aroun' to-day,
For I see th' change that's taken place since then.
All th' hills is brown an' faded, for th' woods is cleared away;
You an' me has changed from ragged boys to men.
You are livin' in th' city that we ust to dream about;
I am still a dweller here upon the place;
But my form is bent an' feeble, which was once so straight an' stout,
An' there's most a thousand wrinkles on my face.
You have made a mint o' money; I, perhaps, have been your match;
But we both enjoyed life better in that ol' tobacker patch.

COMBINED DOOR AND TABLE.

Here is a description for a combined door and table, for pantry or kitchen closet. It may be made of common lumber, dressed on both sides, just as an ordi-



COMBINED DOOR AND TABLE.—CLOSED.

nary batten door, except that there should be two battens on the outside at the top (when shut) and two on the inside near the bottom. It should be put together solidly and then sawed in two about two feet from the bottom. The lower part is hung as any other door. The upper part (which is to serve both as door and table for making out bread, etc.) must be secured to the top of the lower part with hinges (strap

hinges preferred), so that it may be opened back to a horizontal position. It rests on the braces, or legs, which are fastened near the upper part of the top part with hinges, so that when shut they hang down against the door; but when opened down they retain their vertical position. The door, or table, when open, stands around against the wall. A small block, with edges and corners rounded, should be nailed to the floor, on which the outer corner of the bottom of the door may rest when open. The door, when shut, is secured by a button near the top.

B. B. T.

Mangrove, Tex.

DAINTY DISHES OF STRAWBERRIES.

A strawberry ice-cream is certainly one of the most delicious creams made, and one of the most ornamental, served in little ice-glasses on standards, as it frequently is. The French recipe for this cream, which is the simplest, is the best. Weigh out two pounds of ripe, wild berries, if you can get them, rub them through a fine sieve, or tammy, so as to remove the seeds; add to the pulp three quarters of a pound of sugar and the juice of a lemon. Soak two ounces of gelatine in cold water for two hours, stir it over the fire with half a cupful of boiling water till it is all dissolved, then strain it into the strawberry pulp, and finally add a quart of rich cream and freeze. Serve with angel cake or some other white cake, or with wafers.

STRAWBERRY JELLY AND BLANC MANGE.—Make a nice blanc mange with gelatine, flavoring it with lemon peel, and set it aside in a mold and prepare the jelly. This is made of wild strawberries or any strawberry rich in flavor. Soak half a package of gelatine in a gill of cold water for two hours; then add the juice of one lemon and half a pound of sugar and a gill of boiling water. Mash the strawberries, straining enough through a flannel bag to make a pint of juice. Strain the gelatine on the strawberry juice, and strain the mixture through the flannel bag once or twice. It should be a clear, crimson jelly when cold. Keep the jelly and blanc mange on the ice till just before serving. Turn the blanc mange out on a low, crystal platter, and break the jelly into pieces the size of tablespoonfuls and wreath them around the blanc mange. This jelly may be served by itself or in layers with blanc mange. It is excellent served with vanilla ice-cream.

MUSCOVITE ICE-CREAM WITH STRAWBERRIES.—This is a French cream and simple to make, in spite of its Russian name. Strain enough wild strawberries to make a quart of pulp and juice, add ten ounces of sugar and three quarters of an ounce of sheet gelatine, which has been soaked in half a pint of cold water for an hour, and mix over the fire till thoroughly dissolved. Mix the strawberry pulp, gelatine and sugar thoroughly by straining them, and add a pint of cream whipped to a stiff froth. Turn the freezer only long enough to thicken the cream; then pack the can in cracked ice and salt for two hours and a half. Serve.

STRAWBERRY DROPS.—Mix strained strawberry pulp with granulated sugar till a stiff paste is formed. Put the paste in a bright, tin sauce-pan and stir till it boils. Then drop it slowly on a shallow, tin baking-dish, and when cold, set in an oven, with door open, to dry. This is a delicious candy.

STRAWBERRIES ICED.—Mix a light sirup with half a cupful of sugar and a cupful of water, boiled ten minutes. Add a cupful of rich cream and freeze till iced, and pour over a dish of large, fine strawberries arranged in a preserve dish.

KEEP UP THAT RASPING COUGH, at the peril of breaking down your Lungs and Throat, rather let the afflicted immediately resort at once to Dr. D. Jayne's Expectorant, which cures all Coughs and Colds, and ameliorates all Lung Complications and Throat-alls.

Mrs. Koch, the wife of the famous German specialist, has the entire charge of her husband's immense correspondence, and performs her duties as secretary very successfully.

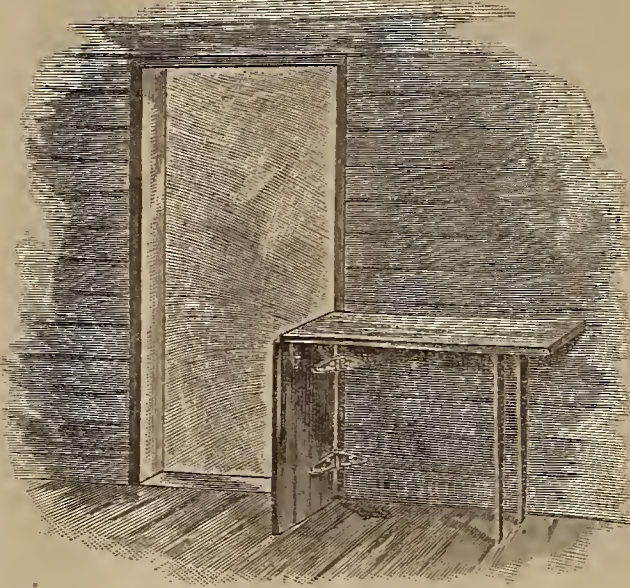
Would'st fashion for thyself a seemly life?
Then fret not over what is past and gone;
And spite of all thou may'st have lost behind,
Yet act as if thy life were just begun.

—Goethe.

CROCHETED FOUR-IN-HAND.

CHRISTIE IRVING.

This popular necktie can now be made in any color by the fair fingers of one expert with the crochet needle, for her young brothers and friends. Two balls of crochet silk at 35 cents a spool is required,



COMBINED DOOR AND TABLE.—OPEN.

and the best silk is the one to buy. They sell, when finished, for \$1.50; so, if they have not appeared in your place, and you are quick with a crochet needle, you can make considerable pin-money. If you cannot get the silk, write to me for it; include postage.

DIRECTIONS FOR SCARF.

Make a chain long enough to contain seven shells. Thread over the needle, and into third stitch on the chain double crochet; then two more the same into the same stitch, chain one and one more double crochet in the same stitch; so on till you have your seven shells; turn with chain of three and thread over the needle into end, making your four stitches; then chain one and in again. Then thread over and pass to the next one, and repeat until you have about three and one half fingers long. Next, narrow down to three shells and make a strip about nineteen inches long. Some prefer to narrow down twelve or thirteen inches, then widen out to seven shells again and make about a finger's length before fastening and finishing off; but this is not necessary, for, as the illustration indicates, that end of the scarf does not show when knotted.

UMBRELLA COVERS.

Take a brass ring the proper size to slip over ferrule of umbrella; cover tight with silk, then pick up the threads all around; put needle through without putting thread over, and pull the thread through the two stitches, and so on, very tight, till you get far enough to require the cover to taper with more fullness; to do this, simply crochet looser. Finish off with scallop, and leave spaces for ribbon to slip through. Before finishing, it must be remembered that a little allowance must be made for stretching after cover is used.

The fast-dye wash silks are made in many grades to suit knitting, crocheting and embroidery. There is the rope-twisted embroidery, Japan outline, Japan floss, Turkish floss, Persian floss and Ecclesiastical silk, all suited to different styles of the work. The beauty of articles made of these silks is that they are pure, wash silks, and will not fade. Neckties can be made of pale colors for evening wear, and black for all-time use.

FRANKNESS VS. POLITENESS.

Frankness is commonly regarded a virtue, yet frankness is too often unkindness. Our frank friend is not the friend whom we love best. We may have great respect for him, but we do not enjoy his society as we do that of our polite friend. We never part company with our frank friend with a light heart and a beaming face. No; we hasten away from him to our polite friend to get our tranquility restored, as we hasten for a spoonful of strawberry jam after taking quinine.

Politeness is another name for kindness; and, leaving out of account all affected politeness, is it not politeness that makes life worth living? Frankness frowns

upon our faults, and tells us of them with saucy relish. Politeness ignores our faults and loves us for what we wish to be. Frankness scans our clothes and makes haste to tell us of any defects. Politeness sees something to praise in our attire, and if there are any blemishes it fails to see them.

The friend whom we say has the virtue of frankness, is the one who exclaims: "What a pity it is you are growing so gray! It makes me feel sad to see you growing old and getting crows' feet around your eyes." Our polite friend sees the gray hairs and crows' feet, perhaps, but he ignores them. He sees something to compliment instead, and makes us forget we are growing old.

We instinctively avoid our frank friend who accosts us with: "What is the matter? Are you sick? You look awfully sallow!" But we would cross the street to meet the polite friend who says: "Ah, a fine morning! Or is it your bright face that makes the morning seem so fine?"

Pray, what is the value of this so-called frankness? If we are sallow or have moth patches, or are losing our youthful roundness of feature, or have a boil on our nose, you may depend upon it we know it without being told of it. We keep a looking-glass at home, everyone of us, and know a little better than anybody else how homely we are, and the frankness that wants to keep telling us of our blemishes is nothing but maliciousness under a cloak.

Blessings on the polite friend who ignores all our blemishes and makes us forget them ourselves. Blessings on the man who makes us feel we are not unpleasant if we are homely. Blessings on the man who thinks so well of us that it inspires us to perfect living in order to deserve his approval. Blessings on the polite man, the sunshine of the world. E. N.

The old, old tunes, the sweet old words
That lips grown silent loved to sing;
How close around the heart they cling
Smiling its truest, tenderest chords;
Let all the world with music ring,
Where'er we rest, where'er we roam,
Not one can touch so sweet a string,
Or to the heart such rapture bring,
As these loved songs of home.

WHEN SPRING FLOWERS BLOOM.

KATE KAUFFMAN.

No. 1.

When spring flowers bloom get out your paint-box and make some studies from nature. It certainly will be an agreeable change from house cleaning and remaking



CROCHETED FOUR-IN-HAND.

old dresses; not but what a clean house and new clothes are also desirable.

Almost the first flower is the dogwood blossom; and nothing is more satisfactory to paint. It is so dashing and stylish, besides being composed of its four clearly-defined petals, it is comparatively easy to

draw. As the branches spread themselves on the tree in a horizontal position, one sees the blossoms in profile, and that view is very pretty. If you turn the branch so as to see the full face of the blossoms, try to avoid monotony of effect. Remember that the flowers farthest away from you, although really as white as those nearest you, must not be painted so in your picture. That is a rule in art. What is near you is lighter in color; what seems to recede in the picture must be painted of a darker shade.

Many inexperienced painters do not succeed with white flowers because they do not shade them. Even in the whitest flowers (if one may use such a term) only the highest lights are pure white; the main color is cream or greenish white, and the shades which give shape to the blossoms are really quite gray. As to the background for dogwood blossoms, you cannot go amiss; a grayish blue like the sky, an olive green like distant foliage, or a warm, burnt sienna tint would be agreeable.

Pansies are also an early flower, and as they have a great deal of individuality, they are not difficult to paint. You know from experience that a wild rose is very easy because it has five distinct petals regularly arranged. A pansy has a similar well-defined construction. It is such a flower as lilac, snow-ball or hydrangea that tries one's skill, because much of it is a half-obscure mass of which one must produce the effect, and cannot rely on precisely-shaped blossoms. I think the reason some painters have trouble with pansies is because they *try too hard*. It spoils a pansy to pat it and smooth it and blend the colors together. I once heard a man find fault with a certain preacher's sermons because the ideas were so elaborately explained; and then he spoke of another preacher whose plan he liked better because "he gives things a dab and let's 'em go." I advise young artists painting pansies to "give 'em a dab and let 'em go."

Morning-glories look as though they would not try one's patience too much, but it is really quite hard to make them look hollow and to get that delicate lightness which is their chief charm. The leaves often have a pretty shape, and the twisting stems are very graceful. If you wish to make a study to be afterward adapted to decorative purposes, paint on gray paper if you use water-color paints, or on gray or buff Holland (curtain material) if you use oil paints. The colors used are madder lake, cobalt and white, or the three colors mixed for the purple variety. The hollow, funnel-shaped centers are always a delicate tint—almost white—of green or gray.

If you are more ambitious and wish, instead of a mere "study," to make a picture of morning-glories, arrange some loosely in a tumbler or finger-bowl. If

observe what proportion of the objects grouped is allowed to go above the place where the lines intersect.

In passing, it may be well to say to portrait artists that in a portrait the head should always be above the intersection of imaginary lines, crossing the picture diagonally from opposite corners. The picture illustrated contains too many objects. The fan, the dish of fruit, the box, etc., elaborate the effect without adding to the beauty. Your simple bowl of morning-glories will be prettier.

It is to be hoped you will succeed well in painting the glass. If it is colorless, whatever is behind the glass should be finished smoothly and allowed to dry first; then mix some oil with white and apply with a hair brush, so as to get the shape of the tumbler and where the light strikes it. Smooth these strokes with the finger. Be careful not to get too much white, except perhaps on one or two spots where the light strikes the vessel. The stems are seen dimly through the glass. If you have used a finger-bowl, it may be any color, and therefore almost impossible to give you directions for its treatment. Amber-colored glass can be represented by using yellow ochre and white shaded with black and burnt sienna and touched up in the light places with cadmium and white. Dark green glass is not very difficult to paint, and it is desirable as a receptacle for flowers, as it does not attract attention to itself, but allows the blossoms to be the main feature of the picture, which is right.

LOSS AND GAIN.

When I compare
What I have lost with what I have gained,
What I have missed with what attained,
Little room do I find for pride.

I am aware
How many days have been idly spent;
How like an arrow the good intent
Has fallen short or been turned aside.

But who shall dare
To measure loss and gain in this wise?
Defeat may be victory in disguise;
The lowest ebb is the turn of the tide.

—Longfellow.

DAINTY LACE.

Explanation of abbreviations:—D c, double crochet; st, stitch or stitches; ch, chain or chains; *, repeat; s c, single crochet; t c, triple crochet.

Madonna crochet cotton No. 70. Make a chain of 22 stitches.

First row—1 d c in fifth st of ch, ch 3, 1 d c in the same st; * ch 3, 1 d c in fourth st from last d c, ch 3, 1 d c in same st; * repeat between stars 3 times more; turn.

Second row—Ch 3, 1 t c in 3 ch of previous row, ch 3, 1 t c in same place; * skip 3 ch, 1 t c in the next 3 ch, ch 3, 1 t c in same place, ch 3, 1 t c in same place; * repeat three times more; turn.

Third row—Ch 3, * 1 d c in 3 ch of previous row, ch 3, 1 d c in next 3 ch, 3; * repeat four times more, with an exception of a t c in last space; turn.

Fourth row—Like second row.

Fifth row—Like third row.

Sixth row—Like second row.

Seventh row—Ch 6, like third row.

Eighth row—Like second row; then 12 t c in the 6 ch of previous row; catch with a s c in the loop at the end of the

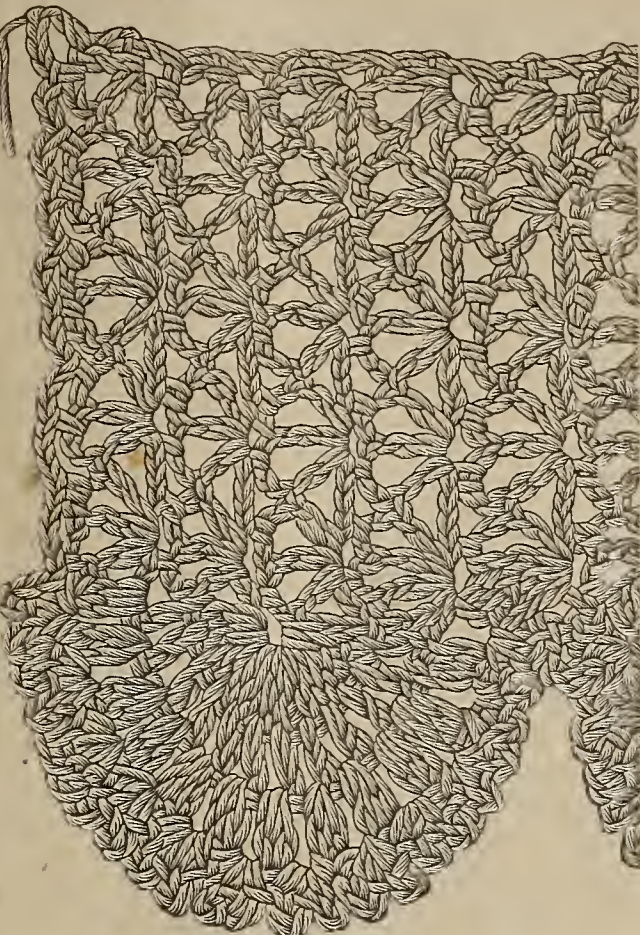
fourth row, ch 3, catch with a s c in the end of third row; turn.

Ninth row—1 t c, separated by 1 ch, between each of the 12 t c of previous row, and 1 t c at the end of the 12 t c, making 12 t c in ninth row; * ch 3, and continue like third row.

Tenth row—Like second row; then 2 t c under ch 3, marked by a * in ninth row; *

ch 1, 2 t c between each t c of previous row; * repeat between stars until there are thirteen 2 t c; catch with a s c in loop at end of second row; ch 3, catch with a s c in loop at end of first chain.

Eleventh row—Ch 4, d c under first space made by 2 t c in tenth row, ch 4, d c in same place; * d c in next space, ch 4, d c in same place; ch 4, d c in same place; * continue between stars until all the spaces are filled; continue like third row. This makes one scallop.



DAINTY LACE.

Begin at second row and continue same as above. When commencing eleventh row, connect one scallop with the other.

ALICE.

Father, I do not ask
That thou wilt choose some other task
And make it mine. I pray
But this, let every day
Be molded still
By thine own hand; my will
Be only thine, however deep;
I have to bend thy hand to keep.
Let me not simply do, but be content,
Sure that the little crosses each are sent,
And no mistake can ever be,
With thine own hand to choose for me.

—George King.

FROM OUR CONTRIBUTORS.

HANDY THINGS.—Doubtless many of the younger members of the FARM AND FIRESIDE household are making plans for the furnishing and adornment of new homes, and are looking forward with bright anticipations to the time when they shall begin a new life in these same new homes. A few hints from an older member are kindly given.

House work, like farm work, is performed with less fatigue if the proper machinery is brought into use; but what the little housekeeper needs most of all is "faculty" in planning handy things. A number of bags will be found useful, and can be made very ornamental if desired. A scrap-bag, to hang on the sewing machine, made of common brown linen or denim, with a pretty pattern in outline, with white. It can be washed when necessary.

A bag crocheted of ordinary carpet-chain, either white or colored, is convenient for balls of yarn. The top is kept open by a rattan and finished with a deep fringe; the meshes should be large enough that the color of the halls may be seen, so that any one which is needed may be easily selected. Make a handsome bag of a square of satin, or what is better, a silk handkerchief; run a circular shirr in it and draw in a rubber cord, with which to gather it. Finish the corners of the handkerchief with plush balls, and trim with loops of narrow ribbon. This is to hold the parlor dust-cloth, which should be a square of cheese-cloth neatly hemmed. Bags for soiled clothes, bags for shoes, bags for umbrellas, are all handy.

Make a number of holders, at least one for each stove, besides the one folded away with the ironing-board. Make them plain or handsome, as fancy dictates; but don't make them with loops, to be hung up.

Let the housekeeper's faculty suggest some convenient place to lay them, as no woman has time or patience to remove a looped holder from a hook when the steak is burning or potatoes scorching. A set of stove-shelves is almost indispensable, as the holder, stove-hook, etc., can then be readily at hand. Do not consider your kitchen furniture complete without a steamer of some kind, with all the extensions possible; one with a copper bottom is more durable than tin, and is very convenient when a gasoline stove is used. Do not be without a wire dish-cloth; any stove store will furnish them.

The cases in which silver knives and forks are bought soon become broken and unfit for use. An excellent case may be made by taking three fourths of a yard of heavy canton flannel, hem each end, and then whip the selvedge edges together, as if to make a bag, only allow one end to extend six or eight inches beyond the other. Then divide the double part into twenty-four equal spaces and stitch it across nicely with the sewing-machine. This makes a separate division for twelve knives and twelve forks. When the knives are in, fold down the few inches of the single cloth over them, to keep them from slipping out, and then roll them up. Make the case so the soft nap will be next to the knives. Spoon-cases can be made the same way, and bags can be made the proper shape, of canton flannel, in which cake-baskets, butter-dishes and other silverware may be kept. Silver cared for in this way is not apt to tarnish.

COUSIN NABBIE.

A NICE WAY TO COOK A CHICKEN.—When young chickens grow too large to fry well, cut them up as for frying, and when ready to cook, put the pieces in a skillet or baking-pan; add a few slices of fresh pork, season well with salt and pepper, pour boiling water around it and put it in a brisk oven; cover with another skillet or griddle, if one has no roaster, and when the pieces are brown, turn them and brown them on the other side; add a little water as the other boils away. When done, take out the chicken and pork and cut up the liver, heart and gizzard in small pieces and add to the gravy; rub a large spoonful of flour smooth in a little milk and stir into the skillet; let it boil a few minutes and serve with mashed potatoes and boiled onions.

To prepare the onions, peel and throw them into cold water (small ones are best), boil them till tender; pour off the water and add a teacupful of sweet cream, a spoonful of good butter; pepper and salt to taste.

CREAM PIE.—One pint of milk, two large spoonfuls of sugar, white of one egg, one tablespoonful of flour or corn-starch, tablespoonful of butter, nutmeg. Line a pie-pan with crust and bake it, watching it carefully while baking, and if it swells with air, press it down gently with a cloth. Boil milk, add sugar, egg and butter; dissolve the flour or corn-starch in a little cold milk and boil all together two or three minutes. Pour into the crust; grate nutmeg over the top; to be eaten cold.

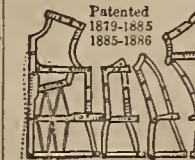


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PLACING OF OBJECTS IN PICTURE PLANE.

not able to complete the picture at one sitting (and that would be almost impossible), each morning you can renew your bouquet in very nearly the same contour. The illustration, "Placing of objects in picture plane," is taken from the *Art Amateur*. The lines drawn from the corners of the frame, of course, are like the equator, "imaginary lines." You

Our Sunday Afternoon.

RESURRECTION.

Each night we seek a temporary death,
And are unhappy if it fails to come,
And morning dawns with life in every breath,
And the tongue speaks, that for a time was dumb.
And when the longer death that none escape,
Conquers our seventy years, or less, or more,
Is it not sleep that takes another shape?
And shall we not awaken as before?
—Charles Mackay.

THE ART OF RESTING.

In addition to the good night's sleep, it is a good plan to take a short nap in the middle of the day. It divides the working time, gives the nervous system a fresh hold on life and enables one to more than make up for the time so occupied. It is well to guard against too long a sleep at such a time, since such is apt to produce disagreeable relaxation. There has been much discussion regarding the after-dinner nap. Many believe it to be injurious; but it is, nevertheless, natural and wholesome. Much can be accomplished in the way of resting, short of sleep. It is very important to economize the opportunities for rest during working hours in the day. The great principle which underlies daily rest is relieving of one portion of the organization from duty while the others are at work. This can be done to a great extent.

When the muscles are tired and worn from mechanical work which requires but little attention of the brain, stop motion and set the brain at work. The laborer can read, think and speak while his weary limbs are at rest. His brain need not be idle because the hammer or chisel has dropped from his weary hand. On the other hand, a man can work with his hands when his head is tired. The book-keeper, whose head is weary with business facts and figures by five o'clock in the afternoon, has considerable time in the evening to sing, play, dig in the garden or black his boots, all or either of which he may do while his head is partially at rest. There is another very important way of obtaining rest mentally; that is, by changing from one occupation to another. The dexterous gold-beater, when he finds one arm getting tired, takes the hammer in the other; and so may the man who hammers thoughts out of his brain, exercise one set of mental functions while the others are at rest. One may read until tired, and then write; may acquire knowledge until weary, and then teach to others.—*The Medical Age.*

CHRIST'S OWN REST.

Christ's life, outwardly, was one of the most troubled lives that was ever lived; tempest and tumult, tumult and tempest, the waves breaking over it all the time till the worn body was laid in the grave. But the inner life was a sea of glass. The great calm was always there. At any moment you might have gone to him and found rest. And even when the bloodhounds were dogging him in the streets of Jerusalem, he turned to his disciples and offered them as a last legacy, "My peace." Nothing ever for a moment broke the serenity of Christ's life on earth. Misfortune could not touch him; he had no fortune. Food, raiment, money—fountain-heads of half the world's weariness—he simply did not care for; they played no part in his life; he "took no thought" for them. It was impossible to affect him by lowering his reputation; he had already made himself of no reputation. He was dumb before insult. When he was reviled he reviled not again. In fact, there was nothing that the world could do to him that could ruffle the surface of his spirit.

Such living, as mere living, is altogether unique. It is only when we see what it was in him that we can know what the word "rest" means. It lies not in emotions nor in the absence of emotions. It is not a hallowed feeling that comes over us in church. It is not something that the preacher has in his voice. It is not in nature, nor in poetry, nor in music—though in all these there is soothing. It is the mind at leisure from itself. It is

the perfect poise of the soul; absolute adjustment of the inward man to the stress of all outward things; the preparedness against every emergency; the stability of assured convictions; the eternal calm of an invulnerable faith; the repose of a heart set deep in God.—*Prof. Drummond.*

HOW PEOPLE DISGUISE THEMSELVES.

Most of us hide behind disguises. Some do it innocently, from shyness. They shrink from standing in naked personality before the world, so they cloak themselves in mannerisms. Usually there are lonely souls which brood over themselves. Thus, in isolated farm houses, whither the poets send us for the simplicities of nature, one is likely to find more affectations and tricks of manner than in our city dwellings. The affectations of a quality, of an accomplishment, is a covert roguery. The covert rogue picks your pocket in his game of hide-and-seek with society. But the man who would win your esteem, admiration, affection, confidence, by appearing to be what he is not, is a rogue so subtle that he often ends in deceiving himself. There is the sweet, infantile creature who simpers and writhes and drops her chin to look up from under her lashes, and uses all manner of guile to show you how guileless she

is. There is the strong-minded woman who talks in chest tones, is always positive and holds advanced opinions on all points—borrowed opinions, since the strength of her mind is not in the direction of originating any. There are the ignorant people who affect culture. This sort of dishonesty gulls only the dullard. Such affectations are open advertisements of poverty, since no one affects what he possesses.—*Harper's Bazar.*

BOYS AND THEIR MOTHERS.

Some one has written beautifully to the boys in the following manner. Here is a whole sermon in a few sentences: "Of all the love affairs in the world, none can surpass the true love of the big boy for his mother. It is pure and noble, honorable in the highest degree to both. I do not mean merely a dutiful affection. I mean a love which makes a boy gallant and courteous to his mother, saying to everybody plainly that he is fairly in love with her. Next to the love of a husband, nothing so crowns a woman's life with honor as this second love, this devotion of a son to her. I never yet knew a boy turn out badly who began by falling in love with his mother. Any man may fall in love with a fresh-faced girl, and the man who is gallant with the girl may cruelly neglect the worn and weary wife. But the boy who is the lover of his mother in her middle age, is a true knight,

who will love his wife as much in the serene autumn as he did in daisied spring time."

THE CHINESE CAN SING.

An impressive scene was recently presented at the Congregational church in Stockton, California. The occasion was the celebration of the anniversary of the Chinese mission in that city. A part of the exercises consisted of singing in chorus and solos and addresses by the Chinese. The singing, especially of solos and hymns, was a surprise, as it was generally supposed that the Chinese were destitute of capacity in that direction and incapable of appreciating harmony, judging by what travelers in China tell us and of the barbarous exhibitions given in this country by untaught emigrants. One soloist particularly carried the audience by storm and elicited applause that was with difficulty checked.

HANGING ON HIS PROMISES.

"What if, after all your praying and trusting, your soul should be lost forever?" inquired a raw young minister of an old Scottish peasant woman who had been drawing her soul-life out of Christ for forty years.

"And is that all the length ye hae got, my mon?" she replied. "I can only say, sir, that God would lose more than I would, for poor old Nannie would only lose her soul, and that wad be sair loss, but God would lose his character for truth and then the world would go to ruin. I hang on his promises and God wad na dare to break his promises."

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THE POULTRY YARD.

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THE PALMER BROODER AGAIN.

In our illustration of the Palmer brooder, in the FARM AND FIRESIDE of January 1st, the interior of the brooder only was shown. We now give the brooder as it appears ready for work. A complete description will be found with the illustration previously given, in January 1st issue.

In the illustration of this issue, Fig. 1, A, is the lamp-box, showing lamp in place under end of tank. B is the door, opened to show the platform for the chicks. The "mother" over the tank is also seen at C. The entrance for the chicks into the brooder is shown at D, while E shows the pipe for filling the tank.

Fig. 2 shows the end view, E again designating the filling-pipe. The brooder is intended for two lots of chicks, there being also an entrance, opposite B, on the other side. Our readers will compare the illustrations in this issue with those of January 1st, in order to thoroughly comprehend the plan of the brooder.

ROUP CHARACTERISTICS.

As a fowl may have a simple cold, or some other disease arising from exposure, the road usually leads to the headquarters of roup. We will describe the condition of some fowls affected with roup. It begins with a swelling, which first appears on the lower eye-lid, and then on the lower side of the head, between the bill and the wattles, and the other eye-lid becomes affected in the same way. The eye-balls are not always affected, but the eye-lids soon become tightly shut, there being but very little watery discharge from the eyes. The swelling is usually hard, but at times softens a little. The fowls may eat, drink and appear healthy otherwise, but finally they begin to fail.

The above symptoms indicate that the fowls have been exposed to draughts of

carefully. The turpentine and sweet oil mixture is an excellent remedy, as well as the chlorate of potash in the drinking water. It does not pay to attempt to cure a lot of common fowls of roup when they require handling and are sick for weeks. It is then best to clear them out, disinfect and begin with a new flock.

CORRESPONDENCE.

BOTHERED WITH LICE.—For cleaning poultry-houses, remove the droppings, whitewash inside and out, sprinkling the floor bountifully with your lime-wash as you go; then use common salt freely over the floor; about twice a month oil the perches with a mixture of turpentine, coal oil and lard, and your poultry will not be bothered with lice through the summer season. MRS. R. C. Bowers, Ind.

WHITE GUINEAS.—In April 1st issue, P. R. C., of Macon City, Mo., asked about the white guineas. I will say for the benefit of the readers, that the white guineas are a little larger than the common speckled guineas, but their habits are very much the same. Some object to guineas on account of their noise, but I think their eggs pay well. They will commence to lay soon and lay right on till cold weather, providing you find the nest and take out all the eggs. They steal their nests, but they are easily found by the noise the hen makes while on the nest. They generally lay between the hours of ten and one. I am not a breeder of fine fowls; I only keep them to look at and for the eggs. MRS. J. B. Y. Raper, Kan.

EGGS AND CHICKS.—In reply to an inquiry from Fairdale, Penn., the correspondent wanting to know how to feed hens for eggs, I will tell him through your paper, as well as all other persons wanting to know. I have thirty-six Plymouth Rock hens and three roosters. I feed them cracked wheat from the mill, called chicken feed (part cheat and part wheat), and give them about one quart per day, but no corn. I also give them sand and mortar mixed, all they want, and plenty of fresh water. My girls just took a bucket of eggs down town and exchanged for butter and tea. My wife sold three dozens of eggs laid yesterday, for fifty cents per setting dozen. She has now 190 chicks, and ten hens setting. I sold twelve dozen chickens myself last spring, at \$3 per dozen, cash. I give hens mortar mixed with lime and sand and cracked wheat. Corn is not good. I am offered seven cents per

MANAGEMENT.—For several years I have been raising chickens and have paid for my learning. First, don't try everything you read in papers. I can see no difference in the constitution of any of my fowls when they are not too closely bred. I have a house 14x9 feet and 5 feet high, the south and east sides having 8x10 inch glass in side. I have five little pens, each 3x7 feet, made of laths, a two-foot hall running full length, a small gate of laths going in each pen. I cut clover and wheat straw in a cutter, mix with dry tobacco leaves and a little sulphur, and put chaff one inch deep on a plank floor, with a shovel of sand, which takes up the filth and keeps the pen dry. I feed cracked wheat and dry corn in the chaff and give plenty of water. Give no sloppy feed if you don't want diarrhea and crop trouble. Grease the little chicks' head and necks with lard, and a very little turpentine in it, to kill the head lice. Don't grease the hen at all, or it will make the chicks too greasy. Too much grease is sure death to little chicks. Put one hen with from twenty-five to thirty chicks in each pen. Her scratching will dust the sulphur all through the feathers and keep them healthy. Drop a little copperas and rusty nails in the water. When they get over half feathered put them in good, big hovels, without any bottoms, out of doors on clean grass. Move them every day or two, only a foot or two. Make the doors of heavy wire cloth, which gives air. Boiled potatoes, dry, is good feed; and milk is good, but not for baby chicks. Don't feed sloppy feed. What I have written has taken seven years to learn. Cynthia, Ky. J. P. H.

FEEDING FOR EGGS.—In reply to O. E. S., Fairdale, Pa., I would say your trouble is in the feed entirely, and not in the hens. Never have any fear of young hens becoming too fat to lay, if they only get the variety of food they need for egg production. Your hens laid well all summer, but not an egg in the winter. Contrast the food for the two seasons. (I infer, of course, that your hens had a free range of the farm during the summer season.) Your feed for the winter has been grain and nothing else, and no eggs. In the summer season hens eat grass, and lots of it if they can get it. They scratch for worms, if not for mischief, and they catch bugs, beetles and many other creeping things, and sometimes the broomstick. Just here is the solution of your trouble—a lack of green food, also of animal food in the winter season. Your flock of seventy-five hens should have been divided into three, and each flock should have had a cabbage head daily, or as often as they would have eaten it greedily, as a substitute for the grass in summer. For animal food some use beef scraps, but what are much better are fresh bones from the butcher's or meat market, cut up into a meat and bone hash—about five pounds daily for seventy-five hens. Purchase a bone-cutter, double your number of hens, give them good, ventilated quarters in the winter season, plenty of milk to drink, as great a variety of food as possible, oyster shells in abundance, and you may safely expect several dozen eggs per day from them, if you have the Leghorn breed, or, what is better for all purposes, the Leghorn crossed either way with the Plymouth Rock. C. R. Coventry, Conn.

INQUIRIES ANSWERED.

Buff Cochins.—C. E. C., Cassadaga, N. Y. "Are the Buff Cochins good layers?"
REPLY:—They are, but are liable to become too fat if heavily fed.

Guinea Fowls.—O. O. S., Coles, Ill. "Has the Guinea fowl any value in market?"
REPLY:—It is seldom seen in market, and has but little if any value.

Paralysis.—Mrs. W. E. G., Livingston, Fla. "I have a young cockerel that seems to be paralyzed in his legs, but is well otherwise."

REPLY:—Probably due to rapid growth and damp weather. No doubt he will recover after the weather becomes dry and warm.

Scale on the Legs.—C. R. S., Peabody, Mass. "On the legs of my hens there is something like a scale, or a white coating."

REPLY:—It is probably the scaly leg. Anoint once a week with a mixture of one part kerosene and four parts lard, or ten drops of carbolic acid with half an ounce of lard.

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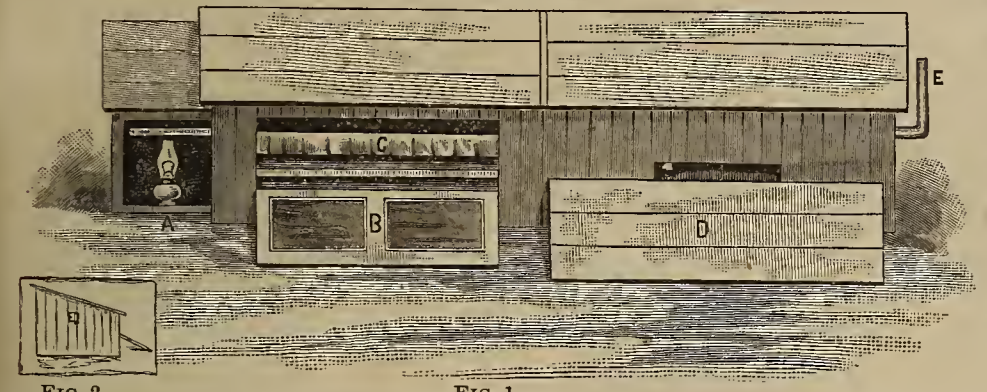


FIG. 2.

FIG. 1.

air above them, or from a crack in the wall, the eye nearest the source of draught being the first to be affected. The best remedy is to anoint the eyes, head, face, back, comb and wattles, once a day, with a few drops of a mixture of one part spirits of turpentine and four parts sweet oil. A teaspoonful of chlorate of potash should be added to each quart of drinking water.

Another characteristic is the croupy roup, which affects the bronchial passages. The birds breathe with great difficulty, the symptoms being similar to those of a child with croup. In such cases two drops of mother tincture of spongia (a homoeopathic remedy) in one quart of drinking water, has been found excellent.

The so-called "pip" is simply a sneeze, but it indicates a cold, and may lead to roup. It is often accompanied with a discharge from the nostrils. The cruel practice of removing a crust from the tip of the tongue is a "relic of by-gone days." The hardness of the end of the tongue is caused by dryness due to the fowl being compelled to breathe with its mouth open, instead of through the nostrils. A drop of kerosene oil in each nostril will sometimes give relief.

When the fowls gradually droop, have discharge from the nostrils, become very thin, lose appetite, and a very foul odor is noticed, it is the scrofulous roup, and it is useless to attempt a cure. It is best to end the disease and the labor with a hatchet, and then disinfect the premises, as nearly all forms of roup are contagious.

We will here say that when fowls have canker in the throat it is known as diphtheritic roup, and it may lead to diphtheria in humans. Such birds should be handled

pound for chickens and have none for sale. I keep the hen-house clean all the time. Follow these remarks and you will have all the eggs you want, and chicks too. T. J. D. Blackburn, Mo.

NOT THE RIGHT KIND OF CHICKENS.—Nine tenths of all the farmers in my section derive no profit from their chickens. Their hens never lay, except during the spring and summer when eggs are very cheap. They never have any poultry to sell except in the fall and early winter when the market is glutted and, of course, prices are low. There are several causes for farmers not succeeding better with their chickens, such as poor houses, lack of care, etc.; but the main reason is because they do not keep the right kind of chickens. Ask any farmer around here why his chickens do not pay and he will say it is because they do not lay in the winter when eggs are at a good price. Look at his flock and you will see a miserable mixture of Plymouth Rock, Brahmas, Wyandotte and Dominque. Ask him why he does not keep thorough-breeds and he will say that you must mix the breeds to get layers. Now, all this mixing of breeds to get layers is a mistake. Nobody should cross games with Brahmas to get better fighting cocks, or Percherons with Hambletonians to improve the trotting horse. Then why should any one expect to improve any of the laying breeds, breeds that skilled poultrymen have spent years in improving with a view to the production of eggs, by crossing them with some breed that has been bred up for the table? Brother farmers, if you want eggs, get the Leghorns, Hamburgs or Minorcas (I prefer Leghorns), but don't, don't think or say that you can beat them with the mongrel assortments that you now keep. E. J. M. Black Ash, Pa.

THE WORLD'S FAIR IN '93

Will be held in Chicago. The Pioneer Buggy in '91 will be made in Columbus, O. If you care to know how, send 10 cents, silver or stamps, for "Complete Horse Book," and that will tell. Pioneer Buggy Company, Columbus, Ohio.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Carp Culture.—W. P. B., Milford, Del. If you are going into carp culture you need a good book on the subject. Send sixty-five cents to L. B. Logan, Youngstown, O., for his book, "Practical Carp Culture."

To Kill Osage Orange or Willow Hedge.—J. H. O., Hopkins, Mo., writes: "The way to kill that osage fence or a string of willows is to cut down at any time of the year and then haul out coarse litter, old straw, coarse manure and cover up the stumps well, say from six to ten inches deep. If you can keep them from sprouting one season I think they will be killed for good."

Kerosene Emulsion.—W. W. R., Rising City, Neb. The best thing you can use for destroying insects is the kerosene emulsion. Take one quart of soft soap, or one quarter of a pound of hard soap, mix with boiling water, and then stir in one pint of kerosene oil; agitate all violently till a permanent mixture is formed; then add water until the kerosene forms one fifteenth of the entire liquid. This is safe on all foliage and always reliable. Apply it with a force-pump so as to dash it onto the foliage.

The Mango Melon.—P. H., Preston, Mo., asks how to plant and cultivate the mango melon.

REPLY BY JOSEPH:—This is evidently a hybrid between cucumber and melon, and may be utilized for preserving. It grows as easy as a cucumber, and requires the same treatment, but may be planted somewhat closer than the more thrifty varieties. The fruit looks well enough, and that, to my notion, is about its greatest value. As a melon, it is a failure; and so it is as a cucumber.

Changes in Lime.—J. E. G., Cherry Hill, Md., asks: "What is the chemical name of limestone rock? What changes take place when it is burned, and then when water is poured upon it, etc.?"

REPLY BY JOSEPH:—Limestone rock is carbonate of lime, consisting of calcium oxide (CaO) and carbonic acid (CO₂); consequently, its chemical formula is Ca C O₃. Burning drives out the carbonic acid, leaving pure calcium oxide (CaO), or quicklime. This has a great passion for two things—water and carbonic acid. If water (H₂O) is poured upon it, each three pounds of the lime combine chemically (under development of heat) with one pound of water, and form slacked lime (Ca H₂O). This, on exposure to air, gradually absorbs carbonic acid, and at last changes again to carbonate of lime.

Sorrel and Grass Choking out Wheat.—C. H. P., Milligan, Tenn., writes: "I sowed about eleven acres in wheat last fall, and put two hundred pounds of fertilizer to the acre, but blue grass and sheep sorrel have almost taken it. Now, the questions with me are, what will kill the above named and will it pay to sow the same field—which I want to do—in wheat next fall, or ought it to be put in something else? If sowed, ought it to be plowed deep?"

REPLY:—If your land is in good till the wheat ought to keep ahead of grass and sorrel. It is probably only because the wheat made a slow and feeble growth that they have taken possession. You can, with advantage, plow and sow the field to buckwheat, and then either turn it under green for wheat next fall, or harvest the crop and then plow again and sow to wheat, using more good fertilizer.

Celery Growing in Louisiana.—Mrs. J. H. C., of Louisiana, asks: "Please give some directions for growing celery for spring and summer use."

REPLY BY JOSEPH:—I am not sufficiently acquainted with the climatic conditions of that state to tell much about how celery ought to be managed there. That it can be grown, I have no doubt. I suppose that plants should be set out in the fall, say September or October, and perhaps later, and that they can be left out until bleached and ready for use. What troubles me is to know how plants can be procured at that time. Perhaps by the selection of a cool, moist, half-shady spot for a seed bed, and sowing seed in June or July, keeping the bed well watered and shaded, plants can be started at that time. The rest would be easy enough. Undoubtedly some of our southern friends could tell us much more than I how to manage the celery crop.

Some Potato and Corn Queries.—T. W. W., Minersville, Kan., asks: "(1) Will small seed potatoes produce as large tubers as large seed? (2) Is the Early Ohio the best early sort for this part of Kansas? (3) What is the earliest potato grown? (4) Is corn shelled from the tip end of the cob as good to plant as that from the middle of the ear?"

REPLY BY JOSEPH:—(1) Small seed potatoes will produce as large tubers as large seed, provided the practice of planting small tubers is not followed up year after year. (2) The Early Ohio is a good early sort; whether best for your section or not I am not able to say. Those in your neighborhood who have tried it can give this information. I believe, however, you will find it a good, early garden sort. (3) I have never yet found a really good potato earlier than Early Ohio and Early Sunrise. (4) Corn from tip end of ear is as good to plant as from any other part of the ear.

White Grubs—Lime.—J. A. B., Bartlett, Mo., writes: "There are hundreds and perhaps thousands of grubs in my garden. They are eating my young peas as they come out of the ground. They are literally plowing up the ground. I don't know the cause of so many, unless it is this: I have been in the habit of putting well-rotted cow manure in my garden. How shall I get rid of them?—Is unslacked lime good for land? How should it be used for wheat? How much per acre?"

REPLY:—The grubs you have named were hatched from the eggs in the manure you applied to your garden. Cultivate thoroughly and frequently and let your poultry have a chance at them. Instead of barn-yard manure, apply good chemical fertilizers to your garden in the future. Mixing wood ashes with the soil is recommended. This grub is the larva of the June beetle and do not reach their full size until the third year. They are not very easy to destroy on account of their underground life. They are very injurious to strawberry plants and many other garden crops.

Crape Myrtle.—K. M., Gratiot, O., writes: "I have just come into possession of a large plant of crape myrtle. It is said to be very beautiful when in bloom. As I am not sufficiently well informed as to the best way to

care for it, please answer in your very excellent paper the following questions: (1) How should it be cultivated? (2) Is it a constant bloomer, or does it bloom only for a brief period in the summer? (3) Will it bear hot sun, or does it do best in the shade?"

REPLY BY GEORGE W. PARK:—The crape myrtle (*Lagerstroemia indica*) is a deciduous greenhouse shrub. The flowers are pretty, borne in clusters, and very beautiful. They are peculiar in shape, each petal having a long, slender claw and a handsomely-crested margin, as shown in the engraving. Our inquirer's questions will be answered in the order in which they are asked: (1) The plants are mostly propagated from slips placed in sand early in spring. When rooted, the little plants are potted in rich, porous soil and encouraged to grow by liberal care and shifting as the roots reach the sides of the pot. Give



them plenty of root room. A six-inch or seven-inch pot is not too large for a blooming plant ten or twelve inches high. In the autumn place them where they will not be subject to frost, and apply water sparingly, though the soil should not be allowed to dry out at any time. Winter is their resting period, and the plants remain through that season devoid of foliage. In the spring, cut the tops back, and as soon as growth begins repot in a larger pot. This treatment is continued from year to year, and the plants increase in size and beauty for several years. (2) The plants begin to bloom in June and keep up a supply of flowers for several weeks. They do not bloom constantly, but the blooming period can hardly be said to be brief. (3) Just after shifting the plants, and until they begin to feel satisfied with their new location, they should be carefully shaded; but when well established they will bear considerable sun. Do not give the plants much heat, especially in the resting period, and if convenient, afford some protection from the midday sun in summer.

VETERINARY.

Conducted by Dr. H. J. Detmers. Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Actinomycosis.—F. C. F., Wytheville, Va. Write to the director of the Ohio Agricultural Experiment Station, Columbus, Ohio, for the bulletin on actinomycosis, which gives you full directions.

An Insufficient Quantity of Milk.—Mc., Butler county, Pa. If you have a good pasture, turn your cow out to grass, and milk at least three times a day. The fact that she was not dry before calving undoubtedly has something to do with the unsatisfactory yield of milk. If no good pasture is available, feed ground oats and good, sweet hay, free from weeds.

A Purulent Secretion of the Eyelids.—F. W. Babcock, Tyler City, Conn. You may use an eye water composed of two grains of nitrate of silver dissolved in one ounce of distilled water, and apply it two or three times a day by means of a glass pipette capped with a rubber bulb. Of course, this eye water will not restore the lost eye-sight.

A Large, Irregular Tooth.—J. C., Iron, Ill., writes: "I have a mare that has a large tooth growing on the outside of her second molar, on left side. It gives her some pain. What must I do with it?"

ANSWER:—Have the tooth extracted by a competent veterinarian. Beware of the itinerant horse dentists.

Blackleg.—Mrs. M. B., Fern, Mason county, Mich. Your heifer died of so-called blackleg, black-quarter, or symptomatic anthrax, an infectious disease, which, once fully developed, must be considered incurable. Places—pastures, stubble-fields, etc.—where the disease occurs, should be avoided by young cattle. Older cattle seldom become affected.

Nonsense.—J. I. H., Hammon, N. J., writes: "Last June my three-year-old heifer had twins, one of each sex. I saved the heifer. She is more than three fourths Jersey and nearly as large as a two-year-old, and a beauty. Now, some men say that she will never breed. Is that so?"

ANSWER:—It is not. What they told you is nonsense.

Jerks Back When Harnessed.—C. F. E., Harvey, Ill., writes: "Will you please tell me how to break a horse from jerking back in the stall when being harnessed? One of our mares jerks back in the stall when the harness is put on her, and breaks strong halters. She is not used roughly and is not whipped."

ANSWER:—Reverse your mare in her stall, with her tail toward the manger, while the harness is put on.

Skin Disease.—V. G. B., Lake View, Iowa, writes: "I have a mare, four years old, that has some kind of skin disease. She eats heartily and feels lively. Her whole skin is rather tender, and she doesn't like to have the blotches removed. Enclosed I send you two scabs taken from her skin."

ANSWER:—It is impossible to determine the nature of a skin disease from a few small tufts of hair, to which only some matted epidermis scales are adhering. Have your animal examined by a competent person.

Swelled Jaw.—N. M., Sabina, Ohio, writes: "Last November one of my horses began swelling on the side of the jaw. The man who was working her said he thought she had been kicked or struck. After a month or so the swelling went down and it began to matter and has been running ever since. I was told to swab it with carbolic acid, one part, rain water, two parts, which I did, but it does not do much good."

ANSWER:—Your case requires a thorough ex-

amination by a competent veterinarian. There may be, and very likely is, a curious or broken tooth, which may have to be removed before a healing of the fistula (2) leading to the outside can be effected. You may, if you choose, send your horse for examination and treatment to the hospital of the veterinary school of the Ohio State University, at Columbus, where the same will be cured, if a cure is possible.

A Lateral Opening in the Teat of a Cow.

—A. K., Juniata, Mich., writes: "I have a heifer that had her first calf in March. The first time I milked her I noticed a small hole on the side of her teat, half an inch from the end, no larger than the thickness of a pin. In milking, a stream is forced through the side and end. It is not sore, nor has it been to my knowledge."

ANSWER:—If the superfluous opening in the teat is judiciously scarified, just enough to make it a fresh wound, and then touched with lunar caustic, a healing may possibly be effected.

Bloody Milk.—C. C., Independence, Ky., writes: "I have a valuable cow that gives bloody milk. I have never seen any lumps in her milk. She had a calf about the first of March. I let it suck about a week or ten days, then took it away and fed it a short time, but found her milk so bad that we could not use it. I put the calf with her again. I never saw anything wrong with her before."

ANSWER:—Such an admixture of blood as you complain of is, in most cases, only temporary. The only safe advice I can give you is to put the cow under good hygienic condition, feed no sloppy food and milk gently.

A Lame Horse.—S. E. W., Watertown, Conn., writes: "I have a fine horse which was taken lame about six months ago in the right fore foot. The frog came off and did not seem to grow but very little. What did grow was hard and dry. For the last four weeks I thought it was better. It looked more natural and he did not seem to be very lame. Now it has commenced to crumble off again. There are two little dents or holes in the hind part of it. There is no scent or matter to be discovered; neither does it seem to be sore, as he will let it be pressed on or handled freely."

ANSWER:—The seat and the cause of the lameness cannot be ascertained from your inquiry. However, the only advice I can give you is to have the horse examined by a competent veterinarian.

A Mare Hard to Catch.—J. T. R., Hargan, Ind., writes: "I have a mare, ten years old, that has become very hard to catch in the pasture. I never whipped her for this. Give me a cure, if there is such a thing as a cure without injuring her, as I wish to breed her. Also, I have a two-year-old colt that carries her tail a little to one side. Is there any remedy for this?"

ANSWER:—Gain the confidence of your mare, pet her, and whenever you approach her give her a piece of lump sugar, and soon she will not any more run off, but come up to you when she sees you. As to the tail of your colt, it has to be determined by an examination whether or not the crook can be removed by an operation, which has to be performed by a veterinarian.

Wants to Know What Killed the Hog.—H. F. C., Kittery Point, Me., writes: "I had a hog that was about eight months old that I was fattening to kill this month. Last night I found that she had not eaten her dinner and would not get up. This morning she had not been up and breathed with difficulty, opening her mouth at each breath. I thought it was stoppage and gave Epsom salts. My feed was two parts gluten meal and one part middlings. About nine o'clock she died. Was it stoppage, and what should I have done?"

ANSWER:—Your question might have been easily answered if you had made a post-mortem examination and reported the result. As it is now, it is impossible to give you a satisfactory answer. It is possible, but by no means sure, that the hog was choked.

Affected in the Head.—A. W. L., Northbrook, Penn., writes: "I have a horse that is troubled with his head. He seems to have a tickling in his ears. He will, when driving, shake his head and throw one ear back on his neck, the other in proper position, and carry them that way. It seems as though there is a buzzing in his ears—something in there tickling him. I have trimmed his mane, drove him with different bridles, and wrapped the bridle about the head with sheep's wool, but to no purpose. He has been affected that way for one year, but seems to get worse. He does it only when in motion."

ANSWER:—Your case requires a thorough examination by a competent veterinarian. There are several possibilities. For instance, it may be that your horse is in a slight degree affected with so-called blind staggers. It is also possible that the symptoms you mention result from an imperfect decarbonization of the blood, caused, maybe, by some chronic lung trouble; heaves, for instance. Further, it is possible that in some way a disorder in the circulation of the blood, either from or to the head, is brought about when the horse is hitched up. Finally, it is not impossible that what you complain of is merely a bad habit by which the animal expresses its displeasure at being driven.

Dysentery in Sheep.—J. C., Ravenna, Ohio, writes: "What should be done to cure and prevent something like dysentery in sheep? A certain flock of last year's lambs, well cared for and kept separate from the older sheep, fed on ground, mixed grain during the winter, have more than half died within a few weeks. Every case proves fatal. None are attacked except said lambs. Disease has been in some other flocks in that section—Columbiana county. Feeding them scorched shorts and flour has done no good. Cannot give more particulars unless, perhaps, the lambs are constitutionally weak."

ANSWER:—The dysentery of your yearling sheep you complain of, probably constitutes the last stage of an anemic or cachectic condition, brought about by entozoa (worms) in the lungs, in the liver, or, maybe, in the intestines, which immigrated in the summer. If the above opinion is correct, nothing can be done now. All you can do is to keep your lambs next summer away from all wet and swampy places and from all pools of stagnant water, and to allow them no water except from a good well. It is in low and wet places, and in pools of stagnant water, etc., where most entozoa pass their intermediate or larva stage. If you desire to know what kind of worms infest your sheep, a carefully-conducted post-mortem examination of the next one that dies will furnish the answer.

JAY EYE SEE, 2-10.

Mr. J. I. Case, Racine, Wis., writes: "After trying every known remedy, I removed large Bunch, of two years standing from 3-years-old filly with three applications of Quiln's Ointment. It is the best preparation I have ever used or heard of. I heartily recommend it to all horsemen." For Cuts, Splints, Spavins, Windpuffs, Bunches, worth many times its price. Trial box 25 cents, silver or stamps. Regular size \$1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

M. A. P.

If neck is chafed, put on the Cap, which spreads the top open, removes the pressure, and lets air to the chafed parts. When not needed, lay Cap aside, leaving ordinary Sweat Pad.

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FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

Our Miscellany.

A THOUGHT.

If you'd have me
And I'd have you,
Why, you'd be won
And I'd be, too.

—New York Herald.

THE DIFFERENCE.

Ten years ago my lovely Kate,
Eighteen was I with you;
But now when I am twenty-eight,
You're only twenty-two!
How is it in time's equal race,
My years have yours surpassed?
"Because," laughed Kate, with roguish face,
"Because you lived so fast!"

—New York Herald.

A CAMEL travels 100 miles a day.

A SCRATCH acquaintance—Tabby.

THE greatest corn-producing state is Iowa.

BEECHAM'S PILLS act like magic on a Weak Stomach.

THE national library in Paris contains 21,500,000 volumes. It is said to be the largest library in the world.

THE massage treatment was practiced among the Chinese before the exodus of the Hebrews from Egypt.

BETWEEN 60,000,000 and 100,000,000 codfishes are taken from the sea around the shores of Newfoundland every year.

A FLEA can jump over a barrier five hundred times his own height. At that rate a man could jump over a wall nearly a mile high.

CHRISTIANIA, Norway, has the largest shipyard. Forty ships load at its docks at one time. The lumber-yard runs a mile.

A MULE belonging to a farmer near Belton, Texas, ate his owner's coat, in the pocket of which was an envelope containing \$512.

THERE are 12,000 square miles of coal land in England and 192,000 in the United States. The English output is about 130,000,000 tons per year.

INFANTS' lives saved by Dr. Hoxsle's Certain Croup Cure. Contains no opium, causes no nausea, cures violent congestion of throat or lungs. 50 cents.

A BRIDE in Montreal appeared at the altar with her pet canary fastened to her shoulder by a golden chain. During the marriage ceremony the bird broke into song.

DURING the last fifteen years the enrolled military force of the leading European nations has doubled. There are now 11,000,000 men in Europe ready to be called into the field.

A LADY who will do writing for me at her own home will receive good wages. Address, with self-addressed stamped envelope, Miss Flora M. Jones, South Bend, Ind., Proprietor of the Famous "Blush of Roses" for the Complexion.

THE German universities have a wide-spread fame that attracts many wealthy and ambitious young men to their classic halls. There are at present on the lists the names of nearly 2,000 foreign students, over 400 of whom are Americans.

THE estimate is made that there are \$2,000,000,000 invested in the dairy business, and about 700,000,000 gallons of milk are produced. It is insisted that less water works its way into this business than into the same volume of railroad stocks.

THE works of watches are now plated with palladium, which is a whiter, lighter and more fusible metal than platinum. About one seventeenth of a grain of palladium will, by electrical deposition, coat the works of an ordinary watch.

WE will mail free to any address, a copy of our Home Treatment, a positive cure for Leucorrhea, Whites and all Female Weakness. Send self-addressed, stamped envelope. May Flower Med. Co., 85 Lake St., Chicago.

DIFFERENT classes of substances have been found to affect the organs of taste in the following order: Bitters, acids, saline substances, sweets and alkalies. The taste nerves are nearly two thousand times as sensitive to quinine as to sugar.

MRS. NEWBRIDE—Oh, doctor, tell me what is the matter with my husband.

Dr. Sensible—Um—er—he is suffering with a severe, but only temporary, paralysis of the muscles, induced by an exaggerated internal application of stimulants.

Mrs. Newbride—And the horrid cab-driver who brought him home said he was drunk.

ETHEL—Oh, at last! It has been years, Alphonse, since I saw you.

Alphonse—Oh, my own Ethel, it has been centuries!

Ethel's Father (up in the library)—Mary Jane, who was that you just let in?

Mary Jane—It was Mr. Cumlotts, sir.

Ethel's father—Great guns! This is the ninth time he has been here this week. He might as well live here.—London Tid-Bits.

THE LONGEST RIVER.

The discoveries made by Stanley show that the Nile is the longest river in the world, being at least 4,100 miles in length. Were the Mississippi regarded merely as a tributary to the Missouri, as some geographers contend, the latter stream would surpass the African watercourse, having a length of 4,800 miles.

PRESERVATION OF ICE.

Fill a pitcher with ice and water and set it on the center of a piece of paper, then gather the paper up together at the top and draw the ends tightly together, placing a strong rubber band around the coil to hold it close so as to exclude the air. A pitcher of ice-water treated in this manner has been known to stand over night with scarcely a perceptible melting of the ice.

FIGS AND OLIVES.

These fruits are a comparatively new crop in California. They sell readily at high prices on the tree. They bear the first year and require little attention. Walter J. Raymond, Dayton, Ohio, offers our readers, in another column, an acre planted in figs and olives for \$2 down and \$1 per week. His son is on the land. A yearly profit of \$50 can easily be paid on every acre. For a small investment, this promises to be very profitable. Look it up.

GENUINE GENEROSITY.

First Beggar—Why didn't you tackle that lady? She might have given you something.
Second Beggar—I let her go because I understand my business better than you do. I never ask a woman for anything when she is alone; but when two women are together you can get money from both, because each one is afraid the other will think her stingy if she refuses. This profession has to be studied like any other if you expect to make it a success.—London Tid-Bits.

SOME OF THE GIANTS.

Furman, the Scotch giant of the time of Eugene II, measured but two lines less than eleven feet six inches.

The body of Orestes, according to the Greek historians, measured eleven feet when being prepared for burial.

Secondilia and Pusio, the giant keepers of the gardens of Sallust, were exactly of the same height, each measuring nine feet six inches.

Paterus, in his published writings, tells of a giant whom he examined at Luzerne whose body measured nineteen feet four inches and three lines.

Chevalier Seovey, in his account of the voyage to the peaks of Teneriffe, says that in opening one of the sepulchral caverns they found a human skull which measured four feet in circumference and which was provided with eighty teeth.

In Rouen, in 1859, workmen found a stone tomb containing a skeleton whose skull held a bushel of wheat; the shin bone reaching to the waist of the tallest man on the ground. Over the tomb the following words: "In this tomb lies the noble and puissant lord, the Chevalier Ricon de Vallemot and his bones."
—Chicago Times.

Recent Publications.

EXPERIMENT STATION BULLETINS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

ALABAMA.—(Canebrake Station, Uniontown) Bulletin No. 11, February, 1891. Experiments with cotton.

ALABAMA.—(State Station, Auburn) Bulletin No. 23, February, 1891. Co-operative soil tests of fertilizers. Report of Alabama weather service. Bulletin No. 24. Dairying and breeding.

CALIFORNIA.—(Berkeley) Bulletin No. 92. Notes on California olives. Their adaptations and oils.

CANADA.—(Central Experiment Farm, Ottawa) Bulletin No. 9, February, 1891. Results of the growth of two-rowed barley from seed imported by the government of Canada.

CANADA.—(Agricultural College Station, Guelph) Bulletin No. 49. Green fodder for swine. Bulletin No. 50. Growth and uses of rape.

CONNECTICUT.—(State Station, New Haven) Bulletin No. 106, March, 1891. The Babcock method for determining fat in milk and cream for the use of creameries. Analysis of butter. Analysis of fertilizers. Bulletin No. 107, April 15, 1891. The Connecticut species of cider apples.

INDIANA.—(Lafayette) Bulletin No. 34, February, 1891. Sugar beets. Field experiments with commercial fertilizers and manure on barley and oats. Tests of vegetables. Bulletin No. 35, March, 1891. Loose smut of oats.

IOWA.—(Ames) Bulletin No. 12, February, 1891. (1) Experiments with potatoes. (2) Sugar beets. (3) Sorghum. (4) Relative value table for milk. (5) Notes and experiments on injurious insects. (6) A feeding experiment.

KANSAS.—(Manhattan) Bulletin No. 16, December, 1890. Experiments with sorghum and with sugar beets.

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KENTUCKY.—(Lexington) Bulletin No. 32, March, 1891. Experiments on vegetables and strawberries.

MASSACHUSETTS.—(Hatch Station, Amherst) Bulletin No. 12, April, 1891. Report on insects.

MASSACHUSETTS.—(State Station, Amherst) Bulletin No. 39, April, 1891. Meteorological summary. Treatment of fungus diseases.

MISSISSIPPI.—(Agricultural College P. O.) Annual report for 1890. Bulletin 14, March, 1891. Injurious insects.

NEBRASKA.—(Lincoln) Bulletin No. 16, April 15, 1891. Experiments on the culture of the sugar beet in Nebraska.

NEW HAMPSHIRE.—(Hanover) Bulletin No. 12, March, 1891. Fertilizer experiments.

NEW YORK.—(Cornell Station, Ithaca) Bulletin No. 26, March, 1891. Experiences with egg-plants.

NORTH CAROLINA.—Bulletin No. 74, December 31, 1890. Tests of garden vegetables. The culture of figs.

OREGON.—(Corvallis) Bulletin No. 9, February, 1891. Silos and silage. Bulletin No. 10, April, 1891. Experiments on the codling moth and hop louse.

RHODE ISLAND.—(Kingston) Bulletin No. 9, December, 1890. Experiments with bees. Artificial heat in brood rearing. Carniolan bees. Foul brood.

SOUTH DAKOTA.—(Brookings) Bulletin No. 22, March, 1891. Injurious insects.

UTAH.—(Logan) Bulletin No. 5, March, 1891. Potato trials.

VIRGINIA.—(Blacksburg) Bulletin No. 9, February, 1891. Tomatoes.

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Oh, the steer, the beautiful steer,
Kicking the fleas from the point of its ear,
Flapping its tail in its frolicsome glee,
Hopping about like a Snake river flea.
Bellowing!
Roaring!
Thundering along!
Filling the air with its steerial song.
Till the rumble from its lung-laden pits
Scarest timid jack-rabbits and wolves into fits.
To me there is nothing on earth half so dear
As the long-horned, slim-bodied Texican steer.

How often I wish that I was a steer,
With a long, shiny horn at the butt of each ear;
With a clear, fearless eye, and a tapering tail
That would snap like a whip in the madden-
ing gale.
How I'd beller
And roar!

And paw up the ground!
And lope over the hills with a thundering
sound,
And snort like a terror, and hump up my back
When I saw the wild cowboy pursuing my
track;
And I'd laugh at his oaths as he fell to the
rear.
Oh, I'd be a Jo-dandy if I was a steer!

I once roped a beautiful steer, but I fell
Fell from my pony with ear-piercing yell!
Fell with the lariat fast to my wrist!
Fell to be dragged through the grass wet with
mist.
Bumping!
Rolling!
Grunting I went!
A full mile a minute, or I don't want a cent,
The gravel and grass yanked the hide from my
nose
And ruined a pair of forty-cent hose;
Aye, even my bustle was thrown out of gear
By the frolicsome freaks of that beautiful
steer.
—Ella Paxton, in Judge.

A PUSHING MAN.

"How is your friend doing out in Helena,
Mont?"
"Oh, he's carrying everything before him."
"Good; what business is he in?"
"He's a waiter in a restaurant."—St. Paul
Globe.

MERELY A SPECTATOR.

"What office are you a candidate for?" in-
quired the reporter, who was making his
hasty rounds of the polling-places.
"Me?" exclaimed the man, leaning up
against the door frame. "Thunder! I ain't
running for anything. I was born in this
country."—Chicago Tribune.

'ACCIDENTS WILL HAPPEN.

Office-boy—"My! Ain't old Gubbins in a
fine temper this morning?"
Sub-editor—"Well, he isn't exactly in the
best of humor."
Office-boy—"What's the matter? Has any-
thing gone wrong?"
Sub-editor—"Yes. He dislocated his foot on
that last poet."

THE AMATEUR FARMER.

"Mine is a model farm," said Barrows. "I
raise potatoes of all kinds. In this field I
plant onions and potatoes together. Result,
300 bushels of Lyonaise potatoes to the acre.
Over in that field I planted fifty bushels of po-
tatoes. In the spring I ran a stone crusher
over the surface. Result 250 bushels of mashed
potatoes to the acre."

SHORT AND SOUR.

"Can you cook?" he asked.
"Yes," she replied.
"Can you sew?"
"Yes."
"Can you wash and iron?"
"Yes."
"Will you be my wife?"
"No! What you evidently want is a hired
girl."

HE DIED IN SPRING TIME.

"Ah, yes, his was a wasted life," sighed the
bald-headed gentleman.
"Was he dissipated? Had he antipathy for
work? Was he a gambler, a lover of fast
horses, a—?"
"Nay, nay," interrupted the bald-headed
gentleman, "none of these, but worse, far worse!
He spent his life endeavoring to raise veg-
etables which should remotely resemble the
gorgeous specimens he had seen in the seeds-
men's catalogues."—Boston Transcript.

SHE KNEW HIM.

"What is the devil?" asked an Austin Sun-
day-school teacher of a new boy, who is quite
small.
"I don't know what it is, but it can't run fast
as my pa can."
"How do you know that the devil can't run
fast?"
"Because I heard pa say he always catches
the devil when he comes home late at night
from lodge. I reckon I'll be able to catch it,
too, when I get to be as big as pa."
"I've no doubt of it," remarked the teacher
with a sigh.

UGHT TO BE CONSISTENT.

"Papa, didn't you scold me the other day
for biting my little brother?"
"Yes, my child; it was very naughty."
"Then, papa, you ought to scold mamma's
piano teacher, for he bit her on the lips the
other day, and it must have hurt her, too, for
she put her arms around his neck as if she
wanted to strangle him."

BUSINESS.

Slick (to Blossom)—"Is this Mr. Bloomer's
office?"
Blossom—"No. His office is across the
hall."
Slick (leaving the door open as he walks out)
—"Thank you, sir."
Blossom—"Hey! Come back and close that
door. Haven't you any doors in your house?"
Slick—"Yes, sir; but they all have springs on
'em. Allow me to show you, sir, my patent,
double, back-action door-spring. It closes the
door without a bang, and is warranted to last
a lifetime."—Life.

BETTER OFF THAN HE KNEW.

A man who was eating a large, raw carrot
stopped a woman on Duffield street the day
after New Year's and said:
"Madam, could you give me ten cents to buy
food with?"
"Why, you seem to have plenty," she an-
swered.
"Raw carrot—see?" he said, as he extended
it.
"Yes, but don't you know that raw carrot
contains ninety-three per cent of clear nutri-
ment against only thirty-three in mince pie
or plum pudding? You ought to be thankful,
sir, very thankful."—Detroit Free Press.

LITTLE BITS.

"Why, Janet! What in the world is the
matter with Fido?"
"He's got a severe cold, dear. I think I must
have left his muzzle off too suddenly, you
know."—London Judy.
Mrs. Noear—"Do you think my daughter will
be a musician?"
Professor—"I can't say. She may. She tell
me she come of a long-lived family."—New
York Weekly.

One of the happiest moments of a young
man's life is when he notices for the first time
that his moustache has grown so long that he
wets it when he drinks.

It does not pay to fool with the Arizona
journalist. The Tempe News had a delinquent
advertiser. The editor took out the advertise-
ment and replaced it by the following: "This
space was taken by ——. He owes \$— for
it and won't pay. Look out for him." The
advertiser got mad and obtained an injunction
restraining the publication, but a judge dis-
solved the injunction.

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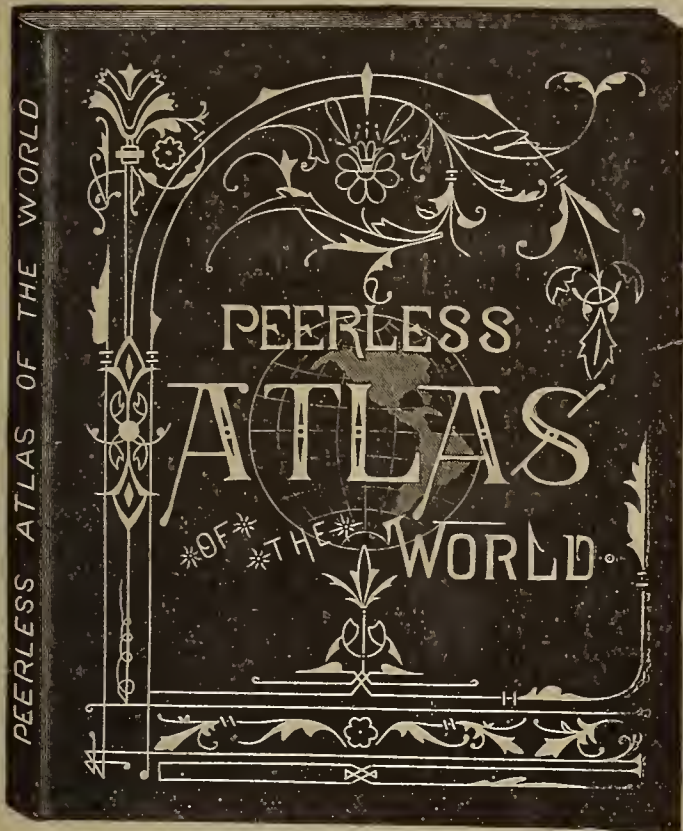
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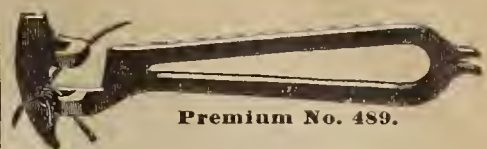
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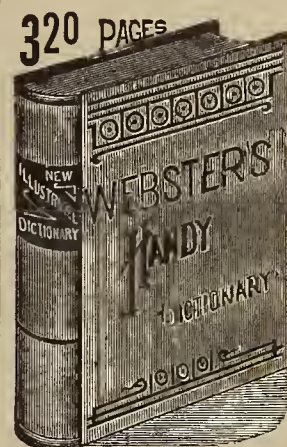
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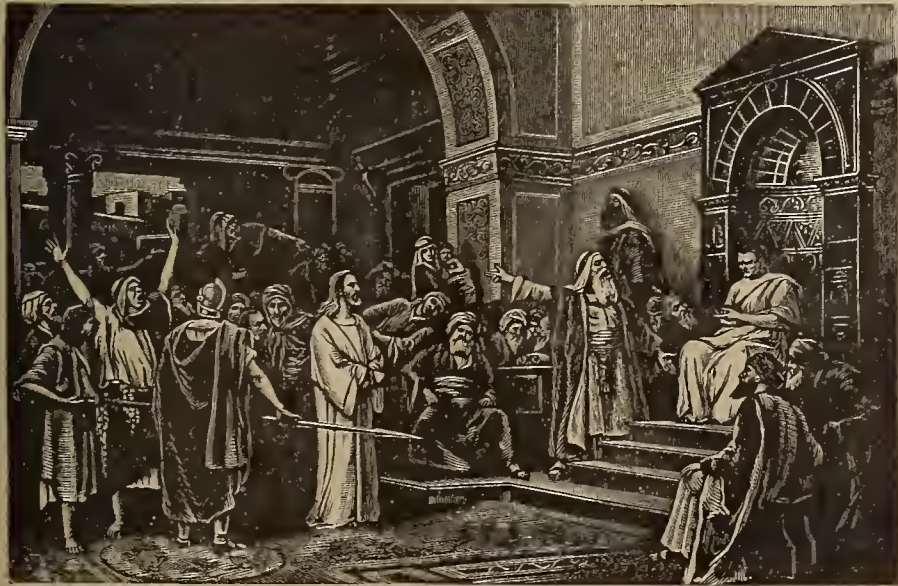
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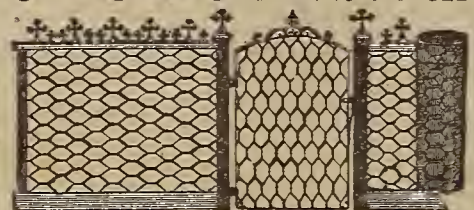
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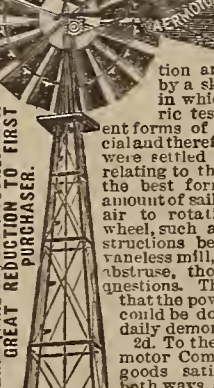


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EASTERN EDITION.

VOL. XIV. NO. 17.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, JUNE 1, 1891.

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Current Comment.

SINCE 1888 the Ohio Agricultural Experiment Station has had a temporary verbal lease on the Ohio State University farm. The time is rapidly approaching when the land will be too valuable as a source of income to the university to be used in the work of the station, and its removal is only a question of a short time. The station is now looking around for a permanent home.

The last general assembly passed an act to authorize the several counties of the state to raise money to secure the location of the station, and to provide for such location. The county commissioners are empowered to raise money for donation to the station by tax. The tax is not to exceed one mill on the dollar for any one year, nor shall the aggregate exceed ten mills on the dollar. Such tax shall not be levied or donation made until the question of the amount to be donated has been submitted to the qualified voters of the county at some special election, thirty days notice of which must be given. If the majority approve of said tax, the commissioners shall levy the tax, raise the money and donate it to the station in accordance with the provisions of the act. The board of control shall accept such donation as they think most advantageous to the station, and locate it on suitable lands in the county.

The county that now offers the best inducements can secure the station. The station needs a farm of not less than 400 acres of land representative of the soils of the state. In addition, it needs funds for buildings, stock and improvements; in all, from \$60,000 to \$80,000. The station needs this for a permanent home. It is supported by the general government.

What is the station worth to the county in which it is located? In reply to this we give the following extracts from the bulletin recently issued by the station to the county commissioners of the state:

The station cultivates annually nearly 300 differently-named sorts of wheat, including all the most promising varieties. These varieties are grown side by side, in such manner that any farmer, in passing through the field in which they are growing, may determine, to a large extent, their relative values. The farmer who lives near the station has therefore a great advantage in being able to visit its fields at less expense than is possible to the one who lives at a distance. But more important still is the fact that he will probably find the wheat growing on a soil similar to his own, and can therefore judge far more accurately respecting the adaptation of the different varieties to his own soil and circumstances than if the experiment fields were in some distant part of the state.

The average annual area in wheat in the twenty counties of the state located nearest

its geographical center, is more than thirty thousand acres each. An annual increase of but a bushel to the acre on this area, valued at 80 cents a bushel, would represent an annual interest of 25 per cent on \$100,000. Those of us who have watched the growth of the station's wheat crops from year to year, know that we can get at least this amount of benefit on our own farms from what we have seen here; but what we have seen any intelligent farmer may see.

Not only wheat, but all the principal field and garden crops are cultivated in comparative tests, in which not only varieties, but different methods of culture are illustrated. The station is now doing valuable work in fruit culture, but it is hoped to make this work of far greater value by the planting of large orchards, vineyards and small fruit plantations, in which not only the important question of varieties will be practically illustrated, but in which the methods for combating insect depredations and for overcoming the diseases to which our fruits are becoming more and more subject, may be shown on a commercial scale.

It is a part of the plan of the present management to collect on the station farm, representative herds of the principal breeds of cattle, sheep and swine, and it is hoped that these may be made of practical benefit to neighboring farmers through reasonable rates of service.

It is hoped that the new location will afford facilities for practical dairying, and that the station may become in some sense a dairy school, in which the latest improvements in dairy methods and dairy appliances may receive practical illustration.

These are a few of the many ways in which a farmer may profit by personal inspection of the station's work, and we believe it to be entirely within bounds to say that any county would be justified, simply from a financial point of view, in maintaining such a station wholly at the county's expense.

A FRIEND has kindly sent us a translation of a letter received by him from an official of the German government, who is connected with the sanitary police control of the sale of meat for human consumption. His official work has caused him to take a lively interest in American pork, and he wrote for full information about the meat inspection laws passed by the last congress. The following extract from his letter shows clearly the attitude of Germany on the subject. In brief, it shows that Germany will receive American pork freely as soon as we send only what is perfectly sound and free from trichinae:

I have just read an article by Kanth, member of the Reichstag, in which the abolition of the embargo is advocated. He (Kanth) cites an article of Dr. Wasserfuhr in the *Hygienische Rundschau*, in which it is claimed it was never successfully established that disease (trichinosis) in Germany could be reliably proven to have been caused by the consumption of American pork, and that all statements concerning the alleged dangers of American pork must not be considered by the unprejudiced as definite proof.

This may be, but, notwithstanding, the German government, in my opinion, will never permit a repeal of the prohibitory laws and ordinances unless the United States gives guarantees that the meat inspection will be reliable. It would also be a gross inconsistency to have an obligatory inspection for trichinae in our own country (Germany), and at the same time admit American pork not subject to such inspection. That heretofore no extensive trichina epidemics have been caused in Germany by American pork, may have its cause in the fact that so far only cured (pickled) pork has been imported from America, and that cured (pickled) pork is always cooked before it is eaten. But after a repeal of the prohibitory measures, the now much-improved and shortened transportation would lead to an importation of fresh meat in refrigerators,

and then the same danger will arise for Germany from the imported meat as from the home product. That the American pork is healthier than the German, and free from trichinae, nobody nowadays will dare to assert. In my opinion, therefore, the only way for America to open the German market consists in a thorough and reliable inspection. That such a one is not secured (guaranteed) by a bill like that of December, 1889, needs no discussion for any one who understands the subject; and it is supposed that the new bill, too, does not give any more security.

What do you say to the plan of attaching experts, German veterinarians or sanitary officers, to the German consulates, for instance, in Chicago and Cincinnati, and assign to them the duty to superintend the inspection of meat in the slaughter-houses working for German export trade? If this means of security is granted by the American government, there would be no difficulty about an abolition of the prohibitory restrictions. Another question is whether or not the American packers would submit to such an interference. But why not, if they can do a good business? What is your opinion about it?

AN Oregon subscriber who has been appointed, by his Alliance, chairman of a committee chosen for the purpose of organizing a farmers' bank, asks for information about national banks.

The Comptroller of the Currency, United States Treasury Department, Washington, D. C., will, on application, direct how to proceed about the organization of a national bank. He is the chief officer of the National Bank Bureau of the Treasury Department, through which the government has control of the national banks throughout the country.

The present national bank system was organized by acts of congress passed in 1863 and 1864. A national bank can be organized by any number of individuals not less than five. The paid-up capital stock must not be less than \$50,000 for cities not exceeding 6,000 in population, not less than \$200,000 for cities exceeding 50,000, and not less than \$100,000 for all others. One third of the capital stock must be invested in United States bonds, to be deposited in the United States treasury for security. Upon these the treasury issues to the banks, for circulation, national bank notes equal in amount to 90 per cent of the current market value of the bonds deposited, but not to exceed 90 per cent of the par value. The government guarantees the circulation and has the first lien upon the assets of the bank, in order to cover any deficit, if it exceeds the amount of the bonds deposited.

National banks are safe, the depositors being secured by the government against loss. They have furnished a sound currency, acceptable in all parts of the country. They are subject to rigid government supervision, and must keep their affairs straight.

National banking is free. Five, fifty, or more members of the Linn county, Oregon, Alliance can form a company, with a paid-up capital of \$50,000, and organize a national bank for their mutual benefit by proceeding according to the laws on the subject, full information about which can be obtained as directed above.

IF to-day every cow in Ohio that does not earn her keeping could drop down into the earth out of sight of these negligent farmers, they would be far better off than to keep them acting the part of mortgages upon the farm most effect-

ually, as they now do," says Mr. Talcott in his dairy article on another page of this issue. That is a truth that should be driven home to every farmer that keeps scrub stock of any kind.

Day and night, season after season, the scrubs go on consuming the hard-earned substance of their owners, like the interest on mortgages.

The amount of farm-mortgage indebtedness runs up to startling figures. But has any one ever investigated the causes of this sufficiently to know just what proportion of the total amount is due to scrub stock? A careful investigation in this line would probably show some surprising results. Get rid of the scrubs. Get rid of the walking mortgages.

It will pay far better to keep a cow that makes three hundred pounds of butter per year and have her die at the age of twelve, than to keep a one hundred and fifty pound cow and sell her to the butcher at the age of six. The one has paid her own way and a profit besides, the other has cost the man unfortunate enough to own her, money every day of her life.

THE notion widely prevails that the sub-treasury scheme is unanimously approved throughout the southern states. This is far from true. In answer to a demand from the Alliances for his views, the governor of Mississippi voices the sentiments of the opposition in the following sensible words:

"The sub-treasury, so far as the sub-treasury is intended to supply an increase of money, promises nothing good to the farmers, who, above all others, will be the victims of the evils of any inflation which will disturb values. They need for their welfare a currency as steady and stable as themselves. Vain are all hopes of deriving relief from more and cheap money, and delusive are the schemes to provide and substitute for industry and economy, anything for one's own efforts, as the means of success and happiness."

THAT spraying is necessary to save our fruit crops seems to have become the accepted opinion among fruit growers. The agricultural press and the station have distributed full information broadcast over the land. Spraying machines have improved until there are a number that can be relied on to do efficient work. It is now war to the end. But so many will neglect to take any part in the warfare that the supply of insect pests will be kept up from year to year. There is only one redeeming feature about it: those who neglect to fight will have little fruit to put on the market in competition with the diligent fruit grower who saves his crop.

TALCOTT's dairy articles have clearly shown the advantages of winter dairying. The progressive farmer who has been converted by them and who intends to adopt the better way, need hardly be reminded that he should begin his preparations for the change at once. His corn has been planted and he can go to work on his silos. The most important work will be to secure a herd of good cows that will come in fresh in the fall. Weed out the old herd and select the best that can be found for the new one, and do it now.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
MAST, CROWELL & KIRKPATRICK.

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Our Farm.

SEED-TIME.

BY WM. W. STOCKWELL.

It's time to speed the plow once more,
Seed-time again is here;
Seed-time to harvest is the door,
And harvest brings home cheer.
Then cast your seed in fertile mould,
And tend the growth from green to gold.

Seed-time and harvest timely come,
Fulfilling nature's law;
Affording means for every home
Life's sustenance to draw;
But plows must run, and seeds be sown,
Ere sheaves are bound or fruits are grown.

Press forward with ambitious pride,
Where waiting fields invite;
Brave-hearted, for your own provide
With hopes and honor bright.
By good work through each season done,
And all that's needful may be won.

On fruitful hills and fertile plains
The sun will shine for all;
And there the welcome summer rains
And nightly dews will fall;
And over all the mellow mould
The growing green will change to gold.

The earth has millions to be fed,
As seasons come and go;
There is a great demand for bread,
And all rare fruits that grow;
And noble plants should evermore
Keep Plenty smiling 'round each door.

We never reap unless we sow,
Though harvest-time may come;
And without care no rare fruits grow
To cheer the hearts of home.
Then cast your seed in fertile mould,
And tend the growth from green to gold

THE DAIRY.

The great importance of weeding out the poor cows of the dairy and fitting them for the butcher's block, is not sufficiently understood by farmers to induce them to adopt this heroic reform. In all human probability at least twenty-five per cent of the cows of Ohio will not give milk enough or the quality of it be good enough so their entire product during the year will pay the cost of their keeping at \$20 to \$25 apiece. Every business man can see that such a cow is an absolute damage to a farmer every day she lives, and why cannot the farmer see it? Simply because he lacks system and method in his farm work; he never has been trained to look well to all the little items that help to make up the grand total of farm labor and cost of farm crops.

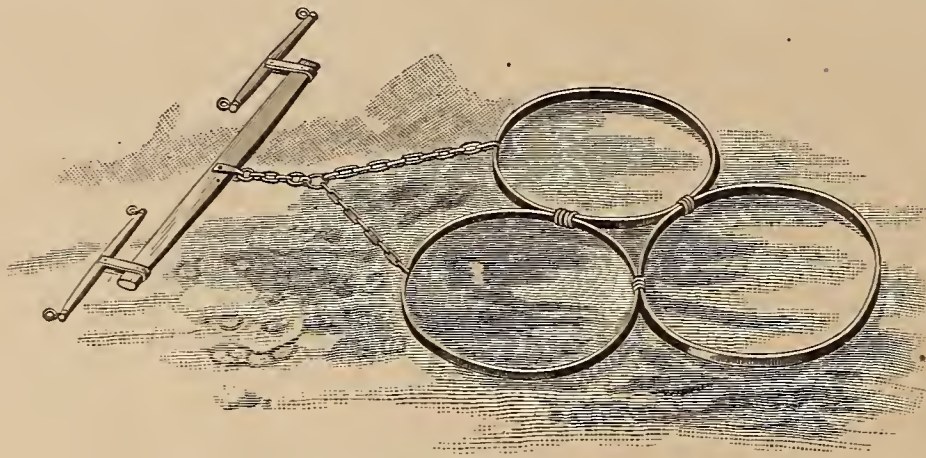
Not one farmer in twenty ever keeps a test account with his dairy cows, or knows the quantity or quality of the milk that each individual cow of the dairy gives. This mistake is a fatal one for best success of the dairy. Every two-year-old heifer should be thoroughly tested the first year of her giving milk, and if she is to be used in a dairy for making butter, and will not make fully 150 pounds of butter the first

season, she is not fit to live. They must do more than that for me, or be fatted and die. I want and do insist on keeping a herd of cows that will average over 250 pounds of butter apiece yearly. This amount, together with the skimmed milk, for feed to pigs and calves or other stock upon the farm, makes dairy cows pay \$50 and more apiece each year. And if farmers will adopt the silo system and ensilage feed, they can make very fair returns from the farm with these aids.

Fifty dollars should be the minimum earnings of a dairy cow, and great excellence is easily attained that will increase it to \$100 apiece. Farmers can do this with high-grade dairy cattle, such as each of you can raise from native cows upon the farm. I find that with the use of pure-bred Guernsey bulls on our common cows, and then raise the heifer calves, will soon bring about the kind of a dairy every farmer should own who intends to make the butter dairy his farm business.

Three years ago I commenced this business with seventeen half and three-quarter blood Guernsey cows and a 2,000-pound thoroughbred Guernsey bull. I am now securing some good, large, nice, healthy dairy cows, from 1,000 to 1,300 pounds apiece, good, fair milkers, and milk as rich as any Jerseys I ever saw, and as high colored. I believe this is the only practical or sensible way for a farmer to secure a good herd of dairy cows. Select the best native cows possible for the foundation, and then you only need to invest extra money in Guernsey sires, and the product will give you good, large-sized cows, not excelled in quality of milk by any race of cattle in the world. Their being so much larger than the Jersey cattle makes me give them the preference, and I think the bulls are not so inclined to be vicious as the smaller, pugnacious breed.

The Jersey cross with native cows also



A WAGON-TIRE LAND DRAG.

adds very much to the quality of milk for butter, and is far better than to rely upon scrub cattle for the dairy. Of course there are sports among our native cows, and occasionally we find one that is wonderful; but as a rule they are not very sure to impart their good qualities if coupled with scrub stock, as they are to be mated with thoroughbred sires of the Channel Island butter breeds, either Guernsey or Jersey. These distinct breeds have been built up from careful in-and-in breeding, upon the respective islands of the same name, for over one hundred years each. No other blood has been allowed to mingle with theirs; and as we now make our drafts from those islands for the foundation of these thoroughbred herds all over the world, it costs too much to buy pure-bred cows for the common dairy. But it is within the reach of every farmer to take this advance step of improvement as I am doing it. A \$50 to \$100 registered bull calf or yearling is all the outlay you need make for many years; careful breeding and selection will do the balance in a few short years, and you will never realize any great inconvenience from the change over scrub cattle.

Farming is a business for life, and the prudent and successful farmer is one who plans ahead and bends nature to his will. The increasing gains while this improvement is being made, should inspire hope and prompt perseverance in all we do upon the farm; and if to-day every cow in Ohio that does not earn her keeping could drop down into the earth out of sight of these negligent farmers, they would be far better off than to keep them acting the part of mortgages upon the farm most effectually as they now do. Of course, I advise the butcher's block for

their destiny, because then they do not amount to total loss.

I greatly desire to have every man who reads this article to go at once to testing the quality of his cows, and then be honest enough with himself to put the above advice in practice, and he will soon find profit in the dairy. Never be mean enough to sell a poor cow to a neighbor or for any other purpose than beef, and you will have less to answer for when you, at the final day, knock for admission into Peter's golden gate.

H. TALCOTT.

A WAGON-TIRE LAND DRAG.

A very cheap and serviceable drag can be made by wiring firmly together three wagon-tires as shown in the engraving. It is best to have the tires of one size, though the hind one can be smaller if you cannot get them alike. The larger they are the more ground they will cover, of course, and tires from hind wheels are to be preferred to fore wheel tires. Additional weight can be supplied by laying green poles across the tires and tying them firmly with wire. This drag is especially useful in smoothing down cotton and corn ridges, and is easily made.

DICK NAYLOR.

COMMENTS ON CURRENT AGRICULTURAL LITERATURE.

BY JOSEPH (T. GREINER.)

PIG-FEEDING EXPERIMENTS.—Can pork growing be made to pay? Dr. Peter Collier, as reported in bulletin No. 28 (new series), of the New York Agricultural Experiment Station, has endeavored to find an answer to this question by a series of experiments in feeding rations of various coarse foods, such as prickly comfrey, oat and pea forage, clover, sorghum and marigolds. From all the facts presented in the bulletin, I can only see my previous conclusion confirmed, that the profits in pigs are extremely doubtful. At present

superficial examination of clover and other grass seeds, or seed grains, etc., can hardly fail to reveal the fact of their cleanliness or contamination. Some of the seeds we find in clover, etc., are perhaps entirely or nearly harmless; but often the worst weeds are introduced and propagated on farms by the owner's own hand when sowing grass seeds and grains. A thorough acquaintance with the seeds of the worst weed pests is really absolutely necessary to every farmer, to enable him to tell whether any kind of grass seed or seed grain is fit and safe to sow or not. The Michigan Agricultural Experiment Station, in bulletin No. 72, names the following as "six of our worst weeds:" Canada thistle, red root (or wheat thief), moth mullein, toad flax (butter and eggs), rib grass (narrow leaved), plantain in clover seed, narrow dock. A pinch of seed of each of these is glued to a piece of paper fastened to one of the leaves, and each kind is properly labeled.

The Canada thistle has become such a terrible pest in many sections that some readers, I am sure, will be interested to learn the method of extermination practiced by Mr. J. S. Woodward, secretary of the New York Agricultural Society. He says: "Have the land rich, if possible; at least, have it well seeded to clover, and by top-dressing with plaster, ashes or some other means, get as good growth to the clover as possible. As soon as the clover is in full bloom, and here and there a thistle shows a blossom, mow and make the crop, thistles and all, into hay. After mowing, apply a little plaster to quickly start the growth of clover. You will find this to come much quicker than the thistles. As soon as the clover has a good start (from July 20th to August 5th), plow down, being careful to plow all the land and to cover all growth. Then roll and harrow at once, so as to cover every thistle. But few thistles will ever show themselves after this, and they will look pale and weak. When they do show, cultivate thoroughly with a cultivator having broad, sharp teeth, so as to cut every one off under the ground. In two days go over with a sharp hoe and cut off any that may have escaped the cultivator. Watch the thistles, and keep using the hoe and cultivator until freezing weather. By plowing this field just before freezing up you will have the land in the finest condition for a spring crop. This plan not only kills thistles but other weeds. It is much better than a summer fallow, and without the loss of any crop."

The red root, if found in the wheat fields, may be pulled up by hand; and a farmer could well afford to spend some time, while wheat is yet small, in hand-weeding his field. The moth mullein can be exterminated by cultivation of the land with hoed crops and digging the scattering plants before seeding. The best and easiest remedy for the toad flax is thorough cultivation with some suitable crop. Seed of the narrow-leaved plantain, or rib grass, is frequently found among clover seed, and then cannot be readily separated from it. Such seed should never be used for sowing. Narrow dock, or curled dock, has a yellow, slender tap root, which is often a foot or more long, living from year to year. If mowed once, or even twice during the season, new stems and leaves spring from the root near the surface of the ground and begin to prepare for seeding the next year. To pull dock from meadows and waste places, wait till the stalks have run up to full height, but have not yet gone to seed, then thrust a spade or stout spud deeply into the soil in a perpendicular position within two or three inches of the plant. While prying a little with the spade, lift the plant with the other hand, removing root and branch.

REMEDIES FOR INSECTS AND FUNGUS DISEASES.—Just at the present time more bulletins are issued on this subject than on any three others, and with just reason. The matter is of the utmost importance. We must use the sprayer and spraying liquids, or lose our fruit crops. That seems to be now a settled alternative, and it should be told and retold until this teaching takes proper effect. Before me is bulletin 12, of the Delaware Experiment Station, treating on injurious insects and insecticides, and also on spraying machinery. The most welcome news in this bulletin, if true, is that the rose-bug can be controlled by the use of

kerosene emulsion. Several rose-bushes that were badly infested with rose chafers were sprayed in the afternoon with kerosene emulsion, using in the proportion of one part of oil to nine parts of water. As soon as the spray of the emulsion struck the beetles, many of them released their hold and fell to the ground. The application was made just at evening, and in the morning many of the dead insects were found upon the ground underneath the bushes, while none were found under the bushes not treated with the emulsion. In other instances the same remedy also proved effective.

The kerosene emulsion, made somewhat weaker (namely, in the proportion of one part of oil to fifteen parts of water), also proved entirely effective in protecting potato and similar vines against flea beetles. The emulsion was used in spray form.

FRUIT ON THE FARM.

Shall farmers continue to produce fruits for home use in face of the fact that insect foes are apparently on the increase, making fruit growing very uncertain? It is seldom we meet with a farmer who is not discouraged in this line, yet they admit that a good harvest of luscious fruit is very desirable. Some have determined to give up the attempt, arguing that upon the same soil they can produce enough of wheat or corn to purchase a supply for family use. Too frequently, however, where this is the case, the wheat and corn are marketed and the money used for other purposes. It is certainly cheaper to produce one's own supply of fruit than to purchase it on the market, even though one must contend with insects and diseases. One is then assured of a supply if the season is favorable, and can enjoy the fruit in its freshest and most delightful condition.

With constant watching, but no great amount of labor, every farmer's household can be supplied with a choice variety of apples, pears, peaches, plums, cherries, grapes and berries. Where there are children, the care and culture of trees and shrubs will furnish them with healthful work and recreation. It will prove a source of many valuable lessons. And they will grow up to possess many kindly feelings for that dear old home, where delicious fruits were always an attraction. How fondly does a man look back and recall some favorite tree beneath which, on velvety grass, he romped or rested as taste inclined or occasion demanded. Happy hours were those, and healthful, too; and through a busy life amidst business-cares, they furnish recollections that are in themselves a source of recreation.

Recall the orchards of twenty-five years ago. Neatly trimmed, washed down with diluted lye, watched and cared for, and loaded of delicious fruits. To-day the orchard is perhaps the most neglected spot on the farm. It is visited only for fruit, and the farmer being disappointed in the yield and quality, still more neglects it in future. Stock and grain claim his time, and the health-giving fruit is placed in the background. Here is room for improvement; and he who plants and trains a goodly collection of fruit trees will surely have a bounteous harvest.

JOHN L. SHAWVER.

AGRICULTURE OF OLD MEXICO.

Nowhere is the traveler so well rewarded for his time and trouble as in Mexico, with its civilization centuries old. On every side the attention of the studious is enlisted; the people themselves, their utensils and modes of operations, are all alike curious.

The people who till the soil are called Peons, and have been for more than three hundred years slaves—the saddest, weariest of slaves—hopelessly tilling for the profit of others, the land once their own. When the Spanish conquerors took possession of all the rich lands of the poor Aztecs, they, the Spaniards, affected generosity and bade the original land owners to remain upon the ground; and when the Spaniards had built store-houses, they allowed them to buy on credit until they became so indebted that they were required to give labor as pay. It became a law that while indebted no man could leave the place of indebtedness, but should work for him he owed at such a price as he chose to give for the labor.

Debts were the inheritance of the children; and thus in utter hopelessness they have toiled on, generation after generation, until, sunken-eyed, sad-faced, we meet them to-day trudging to and from market laden with the produce they or their mules must carry upon their weary backs. They are seen traveling the dusty roads in companies—whole families—the babies strapped either upon the back of the mother or one of the children (boy or girl, no difference which), even as young as six years. I have seen them in groups, at play, so carelessly swinging from side to side the helpless infants upon their backs that I held my breath with fear lest I should see them struck and killed.

The many maimed and crooked-limbed creatures whose presence so painfully saddens all street views in Mexico, doubtless are in most part due to the lack of care in infancy. Mothers are only grown-up children, who are ignorant of all the natural laws of health.

The cooking utensils are oriental jars and pots of baked clay, as curious as those of Egypt. Plows, in many parts of Mexico, are still but crooked sticks that scratch over the surface of the fertile soil. They are drawn by oxen, goaded, to urge them forward, with a sharp-pointed stick, just as we read of them in Scriptural times. Harness is made of rope, one rein only being used. Wagons are still, many of them, but two-wheeled, the wheels being large and heavy, so clumsily made that they are in themselves a load. Wheat is still threshed by flailing; sometimes horses and cattle are set to tramp it out. Of late years commercial intercourse and railroads have introduced various agricultural implements, but while labor remains so cheap farmers or land holders will scarcely invest much money in machinery.

Laborers are paid but twenty-five cents per day, and board themselves. As they work they are divided into companies or groups, large or small, according to the work engaged in. A taskmaster to control them is always near to urge on the work, even with blows, much after the fashion of the slave overseers of the South in the days of slavery. In no respect can we consider their condition any better than the worst driven slave.

HENRIETTA O. OGDEM.

CULTIVATION OF CORN IN THE SOUTH.

A popular idea is that corn ground should be thoroughly well broken in the fall or winter by deep, close plowing; but in the cultivation of the crop, only shallow plowing should be done. The idea is that deep plowing breaks the roots of the young plants and retards their growth.

Very much depends upon the character of the soil as to whether it should be broken deeply in the fall or winter. All stiff, heavy soils undoubtedly should be. Light, sandy soils should be plowed very shallow, just enough to turn under what trash remains upon the land from the last crop. This should, of course, be done with a turning plow set to run shallow.

After corn is up, the first plowing is given when it is quite small and before the roots have attained much length. This plowing should be done with narrow shovels or scooters, run quite close to the plants. The ground is kept in a loose condition, thus the better retaining moisture and allowing a more thorough aeration of the soil immediately around the plant roots. The next plowing should be done with the same sort of plows, or double shovels, and be a little farther from the corn and not quite as deep as the first. Each subsequent plowing should be more shallow and more distant from the plant roots, which are rapidly growing in every direction. The final plowing must be done with twelve-inch sweeps, on a double-shovel stock, set nearly flat, and run in the middles, or water furrow.

Generally speaking, corn rows should (in the South, at least) be three feet eight inches or four feet apart, and the corn should stand one stalk every two feet. In the north-western states it can grow much thicker than this; but for the best results in the South, good distance is absolutely necessary.

One very bad practice prevails in the South in the manner of cultivating corn. I refer to the custom of "barring off," as it is called. This practice is most common in the sandy lands, where the method of bedding up corn land into ridges, like

cotton rows, is pursued. When the corn gets grassy, a turning plow is run along each side of the row, throwing the dirt from the corn and leaving only a narrow strip, or "bar," upon which the plants stand. This bar is then hoed, and the soil thus taken from the young plants leaves their roots very much exposed to the sun; the earth becomes dry and growth is checked. At every plowing of corn the soil should be thrown to, and never from the stalks. This can be most easily done when the crop is planted on a level instead of on a ridge.

DICK NAYLOR.

Texas.

FARM MUSIC.

To the farmer, or to any one interested in all that pertains to progressive agriculture, how cheering, even delightful, are the scenes and sounds on a farm where many kinds of domestic animals have place, enjoy life and are factors of importance in the prosperity of the farmer. There is welcome and music in the neigh of the horse as he thrusts his head out of the stable window and brings his ears forward, indicating curiosity or anticipation. The pigeons are cooing and strutting on the roof of the barn, while others are sailing round and round, their plumage appearing like burnished silver, gold and bronze in the sun as they turn and wheel, flying so low that the "whir" of their pinions is heard, and comes like a strain of music from an invisible source.

There is music in the poultry-yard, music everywhere to those who have appreciative ears. The crimson-crested crower pitches his "lay" on a high note and ends diminuendo, pianissimo, on a lower one. He merely announces, in his own language, set to music, "Here I am! Look at me!" Between his high and forte notes, is heard the soft clucking of the brooder and the sweet melody of her family of singing chicks. The layer's "lay" bursts in as a refrain to all songs. The orchestra, a file of geese coming up from the meadow, now performs on a single, shrill treble-string, and now changes to the bass with a "Honk, honk, honk!" The drum accompaniment is found in the vocalization of the turkey-cock; and he is certainly the drum-major of this, our poultry band. The daintily-dressed guineas are so shy or aristocratic that they must be considered the soloists. Their "Jo Clark! Jo Clark!" is now in unison, and now rises above all other strains.

The ducks are such poor singers, especially the drake, always trying, but never succeeding, and their quacking is so flat, continuous and unrythmical that there is a suspicion that they are in collusion with the singers, and act merely as claquers. Deeper and broader sounds, sub-base of good quality, comes from the breachy cow, remonstrating at her restraint in the stable; and her cry is answered by a sympathetic lowing in the pasture. And in all and through all, filling in the chinks, like small apples in a barrel, are the fine, beautifully-melodious tones of the birds, making a delightful symphony in itself.

The cries of all animals are musical. All may not appear so, but if they be studied, caught and held long enough to analyze or to blend, every vibration will be found to have a musical quality. If those sounds do not always come to the ear in perfect harmony, the ear must correct and re-arrange.

Listen at a chicken-coop at dusk as the hen and her brood are disposing them-

selves for their all-night sleep. Did canaries ever sing sweeter? Go to the poultry-house in the dark and whistle softly. Then may be heard the note of warning, a cautious, inquiring trill that passes from roost to roost like a pass-word, or, perhaps, a word of assurance from the reigning cock, and may be equivalent to "Fear not! I am here!" Whatever the language or sound may be, it is musical, and has a cheerful jingle that is delightful to hear. No man has so much good music—solos, choruses, symphonies—to help as the farmer with his barn-yard or poultry-yard of wind instruments.

GEORGE APPLETON.

A STABLE LUXURY.

A stable luxury to the cow is a light fly-blanket, to be used while milking. In some of the European countries, especially where women do the milking, the cows are always blanketed while being milked, summer and winter. It is a practice we may well copy in this country. We blanket our horses to protect them from flies while standing in their stalls, and why not our cows while we are milking them? Every farmer has old sacking in which fertilizer or wheat bran has been bought, and which may be easily sewed together in suitable size and shape for a blanket to cover a cow. There should be one for each milker. Three sacks sewed together without ripping them open will usually make a blanket large enough to cover a large cow, and which no flies or mosquitoes will reach their bills through. Most of the annoyance from cows' tails being switched about one's face and ears while milking, may be avoided by using such a blanket. Many cows learn the trick of throwing their hay around upon their backs and sides while eating, to keep off the flies, and not a little is thus wasted under their feet. It is well, during fly-time, to keep a stable pretty dark at milking time, and all the time if cows are put up through the day. A cow that is constantly tormented by flies will give much less milk than she would if kept constantly comfortable. It pays to treat our animals kindly, and to keep them happy and contented.—Ex.

SHADING THE HIVES.

Bees should be in the sun till June—perhaps the middle of June. Early in the season bees cannot be too warm; indeed, the warmer they are the more rapid is the increase, not because the bees hatch quicker in warm weather, but because the queen lays more eggs if honey be coming in.

If no shade trees are afforded, let an annual shade of plants be made. Near the hives fix in the ground trees ten or twelve feet high, untrimmed, just as they come from the wood, with leaves on or off. Around these trees plant peas, beans—the white and the scarlet runners—any kind of running plants.

If the tops of the trees be bent down and tied together, there will be a shady bower all summer for the bees, for the plants will cover the trees. The hop vine, also, is a good runner and shader if trained to run as desired.

If the bee keeper does not care to train prosaic peas and beans, but wishes only flowering vines, there are many that will answer the purpose. These flowering plants make not only shade, but also a delightful picture in the landscape. If the apiary be permanent, or the land be occupied continuously, grape-vines for shade and fruit make a profitable investment.

GEORGE APPLETON.

To Restore Strength

And to give a feeling of health and vigor throughout the system, there is nothing equal to Hood's Sarsaparilla. It seems peculiarly adapted to overcome that prostration caused by change of season, climate or life, and while it tones and sustains the system it purifies and renovates the blood. We earnestly urge all who have been closely confined during the winter and who feel the need of a reliable building-up medicine, to try Hood's Sarsaparilla now. It will do you good.

Be sure to get

Hood's Sarsaparilla

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

PLANTING MELONS.—In this locality it is not quite safe to plant tender stuff, such as melons and cucumber vines, etc., much before June. This makes our melon season rather short; but as I am particularly fond of the little Emerald Gem, which is so extremely early, and plant no other except to the extent of a few hills for trial, there would be ample time to ripen the crop in an average favorable season. With watermelons it is different, and heretofore I have had little success with them on our clay loams here. For the sake of making another effort, and also, in case of the muskmelons, to get them a little ahead of their natural season, I have procured a lot of sand from the shores of Niagara river. The places for the melon hills are excavated to the depth of nearly a foot and then filled with a mixture of this sand, ordinary good loam and old, well-rotted manure. Here the seeds have been planted, and a frame to fit a small window is placed over each hill and kept covered with the window for some weeks. I had good success with muskmelons by thus protecting them last season. The sand mixture, I hope, will give me some watermelons this year. Of course, the bulk of the melon crop must be planted in the ordinary way; but with the Emerald Gem variety, good, well-manured soil, and equipped with the knapsack sprayer and all sorts of spraying liquids, I am quite sanguine of success notwithstanding fungi and insects. Tobacco, both in dust and tea form, will be the main reliance for the prevention of damage by the yellow striped cucumber bug.

THE KNAPSACK SPRAYER.—I have just sprayed a young orchard (about ten years old) with the ammoniacal copper carbonate by means of the knapsack sprayer. It works well, and while it is hard work, it is not any more so than much other farm work. If it had to be kept up day after day, it might in the end become terribly tiresome. There are some defects in the sprayer, also, which manufacturers will have to remedy. The hose attached to my sprayer (made by a Washington manufacturer) is not near strong enough, and gave out in some places after two hours' work. I will have to go to Buffalo to buy a new piece of hose. On the whole, however, I am well pleased with the machine and the way it works. I can throw a spray more than fifteen feet high, and it was not difficult to reach every part, and the very tips of the highest twigs of the young trees from the ground. The distribution of the liquid is even and perfect, and economical at the same time. In the possession of the knapsack and the Bordeaux mixture and Paris green or London purple, I feel competent to hold my own against the potato blight and the potato bug. I do not any more fear the job of applying Paris green, as I always did before I had the knapsack. It is so much easier to carry the liquid on one's back than in a watering can in the hand, and the liquid, owing to its fine distribution, goes such a long way that there will not be the drudgery about it involved by the task of carrying great quantities of water, and apply them in a tiresome and (to the plants) often hurtful way. I feel as if the victory was already won, and certainly assured. The even distribution of the poison alone would be a safeguard against injury to the foliage. But since I am going to combine the Bordeaux mixture with the Paris green, there will not even be a possibility of such injury to the foliage, as the lime of the Bordeaux mixture neutralizes the caustic effect of the arsenious acid in the green. In how far this application will at the same time prove a remedy for the flea-beetles, which have been so destructive for a few years, remains to be seen. I have put my hopes on strong tobacco tea, should the other fail. Altogether it now seems that we should be able to get the upper hand of all our enemies, in one way or another, and this really with comparatively little trouble, so long as we are prompt to make the required applications. My grapes were rotted so badly last year that I had little more than a taste. I propose to have the crop myself this year. A few weeks ago the first application was made by spraying a saturated sulphate of iron (cop-

peras) solution on the canes and swelling buds, so thoroughly that the wood was entirely coated over with the crystals for many days afterwards, and until a heavy rain washed the coating off. I shall spray them with the ammoniacal copper carbonate (copperdine) as soon as I get the new hose, and with the Bordeaux mixture as soon as the first leaves appear. I must have grapes this year.

TOMATO GROWING.—A reader in Harper, Kansas, writes that for a number of years he has tried to raise tomatoes, without success. The plants grow vigorously and bloom freely, but the fruit does not stay on. Transplanting, pruning, cutting back, etc., have not improved matters.

Now, in a good location, where the summers are long and warm, and not only on "sandy loam of medium quality," but on almost any kind of well-drained soil, few things are grown more easily than tomatoes, even from the seedlings that spring up in the garden and happen to escape the hoe and cultivator. All you have to do is to give the plants a chance and they will bear fruit abundantly. It is not absolutely necessary that the soil be very rich. Any good farm soil will bring a crop, but I have never seen a better one than on good land that had been heavily manured with fish compost. Phosphoric acid seems to be especially useful for this crop in bringing the fruit to early maturity.

The mineral elements of plant food may be applied around the plants and worked into the soil with great advantage. My experience is that for this crop we can rely entirely on concentrated fertilizers, and perhaps to some extent on hill manuring. A high-grade potato manure, a handful or two to the plant, has never, in my experience, failed to give very satisfactory results. Ashes, leached or unleached, are also most excellent. Under no circumstances would I neglect the use of some sort of phosphate or superphosphate, as this is sure to hurry up the ripening of the crop. The complete manures, offered under the name of "special potato" or "vegetable" fertilizers, contain, besides superphosphate, potash and nitrogen, and can be used with entire confidence. On the whole, the tomato is not a dainty plant.

The mistake most generally made by the home gardener is setting the plants too close. In that case they may act in the way complained of by our Kansas friend. I have seen this often. The rich soil of the home garden brings out a great mass of vine and plenty of blossom, but the plants crowd each other and suffer for room, air and sunlight. Consequently the fruit does not develop. On such soil the more vigorous varieties should be given a space of at least five feet square to the plant. The more dwarfish varieties—like Dwarf Champion, or any of the first earlies—may do well enough when set four by four, or four by four and a half feet, and even somewhat closer on poorer soil.

As to varieties, I think that Matchless and Ignatum stand at the very head of the list; they are good enough for anybody. I have quite a large number of new ones under trial again this year; but the one that will beat Ignatum and Matchless must be good indeed. For first early my choice at present is Early Ruby.

One more precaution. Be sure to have your plants grown strong and stocky, rather than quickly, and to harden them off very thoroughly before setting in open ground.

SAGE GROWING.—A subscriber asks for a few hints on sage. In reality the subject needs but a few words to do it full justice, for sage is an easy enough thing to grow. Sow seed in early spring in well-prepared soil, in same way as you would sow cabbage. The seed germinates readily, and plants, in due time, may be thinned and either left there to produce a crop of leaves, or transplanted into a border, where they are to remain permanently. The Broad-leaved is now usually grown. I do not think the plant is very particular in regard to soil. A sandy

loam is probably the best. Plants can also be readily increased by layering. For this purpose the large plant is spread out evenly on the ground and a shovelful or two of soil thrown upon the center, covering all except the tip halves of the branches.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

HARDY STOCKS.

BY PROF. J. L. BUDD, READ BEFORE THE MINNESOTA STATE HORTICULTURAL SOCIETY.

FOR THE APPLE.—We have no congenial native species of the apple for use as stocks, such as are found in all parts of Europe. The wood of our native crab is hard and fine grained, and does not unite properly with one variety out of a hundred of those noted in our fruit books. The Siberian crab also differs in wood, and its use must be confined to very few varieties. So far as known at this time, the best available stock for top-working of the North are some of the Russian varieties, such as the Anis, Hiberna, Recumbent, Bergamot and Silken Leaf. If worked with short roots and long scion, so as to start roots from the scion, such varieties will, I believe, be extensively used for top-working in the near future. In Iowa the use of very hardy summer varieties, such as Whitney's No. 20, Duchess and Anisette, is not advisable for winter varieties. At Dubuque, Iowa, the Ben Davis, Whitney's No. 20 and Duchess become a fall apple, and the same effect is reported in other parts of the state. But at the North, the use of varieties as late in season of fruit as the Anis or Hiberna has not resulted in hastening the maturity of winter sorts worked on them.



BASKET WORM.

a, full-grown worm removed from bag; b, male chrysalis; c, female, wingless and footless; d, male moth; e, bag containing female and soft, yellow eggs; f, full-grown worm in bag; g, young worms in bags.—Riley's Reports.

FOR THE PEAR.—We have no suitable stock on which to crown-graft or bud the pear, which as yet is obtainable in quantity. But the hardest Russian varieties may be compelled to root from the scion as worked from common French stocks, and can be used as stocks on which to work varieties slightly less hardy in tree and of a better grade of fruit.

FOR THE PLUM.—We are fortunate in having strong-growing, native varieties of the plum, on which the hardy Russian and the best native varieties do well when crown-grafted, budded or top-worked. The Russian prunes and apricots we also find to do well on our native species.

FOR THE CHERRY.—That we now have varieties of the cherry from east Europe hardy enough for the North, is beyond all doubt or dispute; but worked on the commercial stocks, they are liable to be lost by root killing. That it will prove best to grow them from root cuttings will not admit of a doubt; but at the present, trees on their own roots are scarce, and I believe that we can profitably use two of our native species. The Wild Red cherry (*Prunus Pennsylvanica*) has proven an excellent stock for budding. Trees now several years old have not outgrown the stock, and the union seems perfect. The Dwarf Mountain cherry (*Prunus Pumilla*), as seen in its native haunts, does not appear to be well adapted for use as a stock. But we find the seedlings to be upright in habit, and to bud as well as the Mahaleb. The plants can be grown thickly in nursery and set out the succeeding spring in rows for budding, precisely as practiced with Mahaleb. At present I believe this will prove the favorite stock for the whole North and extreme North-west for the dwarf varieties of the race which unite perfectly with its wood. The conclusions so hastily and briefly outlined, are the results of twenty-five years of experience and observation on both continents.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Black Currants.—A. J. W., Fall River, Mass. I think the trouble probably is with the variety of black currants you are growing. There are some of its varieties that fruit very sparingly or not at all. The Black Naples is a prolific variety.

Dewberries.—A. D. C. writes: "I would like to ask how to handle dewberries. I put out five hundred in the fall of 1889 on strong, sandy land with clay sub-soil. Dry as it was last summer they grew finely. They stand in bunches almost as large as a half bushel, while runners go out in every direction. Should I take those runners off or had I better lay them over and mulch the hills and then put them back on the mulch?"

REPLY:—You should shorten back the runners and put mulch of some sort under them.

Orange not Bearing.—Mrs. J. N., Grapeville, Pa. The orange-tree you have is, I take it, a seedling you are growing in the house. Under such conditions seedlings have to be very old before they will blossom. It should be budded with some earlier maturing variety. Many greenhouse men will do such work for a small consideration, and you had better try and get some one to do it. They may also be successfully budded in the summer by any one accustomed to such work. Get buds from some orange-tree known to flower.

Gooseberries—Raspberries.—M. A. J., Union county, O. The varieties that are most prolific and well tried are the Downing, Smith's Improved and Houghton's Seedling. The first I prefer for quality, while the last is the hardest, most productive and freest from mildew. Any of the strong-growing, standard varieties of raspberries will grow year after year without renewing, if properly cared for. You might try the Souhegan or Nemaha if you want a black raspberry, and for red, the Marlboro or Cuthbert. Raspberries need plenty of manure and well repay good care.

Plum Rot—Grape Rot.—J. F. B., Factoryville, Pa. There is no method that is easy to use on a small scale. The easiest is probably effected by spraying the fruit about once in two weeks, after it is set, with the carbonate of copper solution made as follows: Mix thoroughly six ounces of pulverized ammonia carbonate and one ounce of copper carbonate. Keep in an air-tight vessel, and when ready for use dissolve in ten gallons of water. To prevent your grapes rotting you had better bag the clusters in paper bags as soon as the fruit is set. It can be quickly and cheaply done and is quite effective. It also protects from birds and insect pests.

Basket Worm.—J. H. S., Decatur, Ark., writes: "Please examine and name the enclosed cocoons and tell me whether they injure my fruit or trees. The long ones are numerous on my trees."

REPLY:—The long cocoons are those of the bag or basket worm, and are found during the winter hanging from many kinds of trees, including some of the evergreens as well as deciduous kinds. It is seldom found north of New Jersey. They are not often abundant, but may sometimes become so and will then strip the foliage from the trees they are on. If examined in the winter many of the bags will be found empty while others will be full of soft, yellowish eggs. Those that do not contain eggs are male bags, and the empty chrysalis skin will be found protruding out from its lower end. The eggs hatch about the middle of May or early in June. The young larvae are active and begin at once to make themselves a covering of silk, to which they fasten bits of leaves of the tree they are feeding on, forming small cones. As the larvae grow they increase the size of their enclosures or bags from the bottom until they become so large and heavy they hang instead of remaining upright as at first. By the end of July the caterpillars become full-grown, when they look very peculiar with their heads protruding from the long bag, which they take along with them for protection. They are not grown fast to the bag, but cling to it by numerous hooks on the hinder part. The outer surface of the bag is rough and irregular from the sticks that are woven into it. During their growth they seldom leave the tree they are hatched on, but when full-grown lower themselves to the ground by a silken cord and then slowly wander from place to place. When about to change to chrysalids, they fasten their bags securely to the twigs of trees on which they happen to be and then undergo their change. The female moth is wingless and never leaves the bag, but works her way to its lower orifice and there awaits the attendance of the male, which has wings. The female is not only wingless, but legless also. After depositing her eggs within the case the female works her way out and drops exhausted to the ground and dies. Where the insects occur in abundance, they often entirely defoliate the trees. This may be easily prevented by gathering the cases containing the eggs and burning them. The round cocoons are those of some spider.

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EXTRACTS FROM CORRESPONDENCE.

FROM TEXAS.—Montague county is a good country for farming and fruit raising. We can raise almost all kinds of fruit here. I have a small orchard just out of the corporation of Bowie and I have a variety of fruit growing. I have bearing apples, peaches, plums, pears, figs, apricots, cherries, quinces, grapes, mulberries, raspberries, gooseberries, blackberries and strawberries, and I have pecans, chestnuts and walnuts growing, but not bearing yet. J. B.

Bowie, Tex.

FROM TENNESSEE.—Hamilton county is one among the richest counties in the state. We have an abundance of coal, iron and sandstone and a great many other valuable minerals and building material. We have tolerably good land, and it is susceptible to improvement. Still it is cheap. Produce here now is very high. Corn is worth \$1.15 per bushel; wheat, \$1.10; oats, 63 cents; potatoes, \$1.35; cattle, \$2.50 to \$4 per cwt.; hogs, \$3.25 to \$3.50. The growing crops of wheat and oats look well. F. J. M.

Coulterville, Tenn.

FROM IOWA.—Fremont county is the garden spot of Iowa and the best corn country in the world. It is also a good fruit country. Small fruit, apples, peaches, plums and strawberries, now promise abundant crops. Hamburg is a beautiful little town nestling at the foot of a high bluff, which extends to Council Bluffs, a distance of sixty miles. What we need here are a canning factory, packing house and starch factory. Hamburg is beautifully situated and is surrounded by beautiful and productive farms. Land is worth from \$25 to \$50 per acre and is increasing in value every year. Hamburg, Iowa. C. S.

FROM WASHINGTON.—Permit me to tell you about our wonderful island of Orcas. As to climate, I am convinced that there is not a more healthful, even climate on the Pacific coast than on our island, and that is saying very much. We have many more clear days than they have on the mainland. Our winters are our rainy seasons, but there are very few days that a person cannot work out, for most of our rains come during the nights. We have not much sickness and no saloons, and we have no need of either. Pears, cherries, plums, apricots, peaches, prunes, quinces, nectarines, apples and all small fruits do very well here. Our land is of various sorts, and runs from the very rocky and stony to the deep, black loam or bottom lands, and from high, hilly land to swampy lowlands. G. H. W.

East Sound, San Juan county, Wash.

FROM FLORIDA.—At this writing (April) we are having plenty of rain and fine weather. Corn is from knee to waist high. Native plums are commencing to ripen; they are a large, fine fruit, good quality and excellent flavor, and grow in abundance. Peaches will be plenty. The early varieties, such as the Yum Yum, Bidwell's Early, Peento and Honey, will soon begin to ripen; then other varieties will come in, in rotation, until November. Strawberries have been in constant bearing since the last of January, and are still blooming and bearing, and will continue until about June first. The prospects for all kinds of fruits are good. The orange crop, no doubt, will be the largest the state has ever had. The past winter has been a very mild one. We had considerable cool weather, but no cold, the mercury only reaching the freezing point once. J. I. M.

FROM WASHINGTON.—I have lived in Lewis county two years and find this the best place for a man of limited means. Fruit and vegetables grow and produce well. One man raised \$810 of raspberries on one and one sixth acres. Turnips grow as large as forty-six pounds, potatoes, three pounds apiece and cabbage forty pounds per head. We never suffer from drouth. Cattle live out on the range all winter, with no feed but what they pick, and come out fat enough for the butcher. Immigrants are flocking here rapidly. Land is rating from \$10 to \$175 per acre. Butter is worth 35 cents per pound; eggs, 23 cents per dozen; wheat, \$1; oats, from 80 to 90 cents per bushel. Potatoes sold last fall at \$1 per bushel. Hops are a productive crop. Lumbermen are rapidly clearing the timber away to make room for settlers. This is the Eden of the United States. We have good schools and plenty of churches, and the best class of people live here. B. P. B.

Napavine, Wash.

FROM NEW MEXICO.—We have here one of the richest valleys in the world. It is thirty to forty miles wide, three hundred miles long and as level as a floor. The Pecos river, which flows through the valley, carries a bounteous supply of water, and is fed by hundreds of living springs, from its source to its mouth. An extensive system of irrigating canals is now in course of building, one hundred and twenty miles of which are already completed. Over four hundred thousand acres of rich lands have been reclaimed by these canals, at least twenty per cent of which are still in the hands of the government, subject to entry under the homestead laws. A railway has lately been built into the valley, so that farmers have a direct outlet for their products. We

have the same climatic and soil conditions as exist in southern California, and being a thousand miles nearer to the eastern markets, this valley is destined to become, in the near future, as rich a fruit country as any portion of that state. G. O. S.

Eddy, N. M.

FROM IOWA.—Ringgold is a border county in the south-western part of the state. The land is rolling, and in some parts of the county it is very rough. We very seldom have a failure of crops in this county. Hay last season was a poor crop; consequently the price was very high this spring. It reached \$20 a ton; but pasture is now good, blue grass especially. We are now getting 60 cents per bushel for corn; 45 to 50 for oats; hogs, \$4.25 per cwt. A great many cattle are fed in this county, which consumes the larger part of the corn raised. Land went up in price 25 to 40 per cent last year. Beaconsfield, Iowa. C. M. C.

FROM ARKANSAS.—We have a better country here than we get credit for. We live in Grand Prairie, and it is not improperly named. This country is not like any other country in the world. These prairies are a body of silt such as is found no place else. We drive our wells for good water through silt, and occasionally a hardpan of clayey substance of a few inches or feet, to a depth of one hundred feet, on an average, and strike a body of water percolating through coarse, sharp sand and a flinty gravel, such as is found on the slopes of the Ozark mountains. The climate is semi-southern. While men of the North are shivering with cold and packing up ice to cool their excessive summer heat, and piling onto their bodies woollens, flannels and furs, we dress up in common apparel, with a pair of rubber boots, a "slicker" and an umbrella, and travel around with perfect nonchalance. Sometimes we have a little snow and a crust of ice, just enough to give the frogs a little rest, and then we go on again, just as cheerful as a holiday. Men live here and keep about as healthy and fat as in other brag countries. Those of us who work and manage our affairs with discretion, get a good living and make some money for a wet day; and that is sure to come. There is more profit from an acre of cotton here than from an acre of corn, wheat or oats. Twenty good Arkansas cows will give a net profit of \$100 per month for eight months. Our creamery is now running on 8,000 pounds of milk per day, which might be increased indefinitely. Stock raising in this country may be made as profitable as in any part of the United States. Stock must be acclimated. Don't bring teams of horses; bring colts not more than two years old. Don't bring cows or hogs; bring calves not more than one year old. Don't bring seed, especially corn, from the North. Everything has to be acclimated. Men, women and children die more from overtaking their energies for the first year or two than from disease. The prairie is the best for all purposes in making a settlement, except for fire-wood. Bring all your religion worth having and your loyal politics. If they are not worth having, then sell them at their value, and buy "pure and undefiled." But don't come to this country to swap in religion, church polity or politics, as so many others have done. Bankruptcy is sure to follow such a course, both in time and for eternity. Carlisle, Ark. A. M. T.

FROM FLORIDA.—Lee county has had but eight deaths since May 31, 1890, and about forty births, from an estimated population of eighteen hundred. When the census enumerator reported that there had been only ten deaths during the census year, from a population of fourteen hundred and seventy-five, the superintendent of the census, Robert P. Porter, was astonished, and asked the enumerator to correct his returns, as the usual rate should have been about twenty, instead of ten. Investigation showed that the first report of the enumerator was correct, and that Lee county is the banner county for good health among all the counties in the Union. In reply to a letter from the census enumerator, Dr. L. C. W. wrote as follows: "It would be strange if Mr. Porter did not object to the correctness of your mortality report, for it is less than one half as much as the death rate of other countries that are called healthful. I have been engaged in the practice of medicine and surgery during the past forty years, and the last six years here at Fort Myers. Being health officer and post inspector the past four years for Lee

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county, has given me an excellent opportunity to procure the number of deaths, as well as births, which was my duty to establish the vital statistics of Lee county, Florida. In the discharge of my official duties, I think I have learned of all the deaths during my term of office in Lee county, and I find it to be at the rate of six or seven per annum in one thousand people. I have no doubts about the correctness of your report, which would be corroborated by all that know your position in society, and being principal in our graded public school. This low rate of mortality, which you have reported for Lee county, I find to be in common with the rest of the counties in the southern part of the peninsula of Florida. Many reasons may be given why the death rate is so small in Lee county: 1. Our county is composed of prairie and pine forests. The oxides of turpentine render all pine countries healthful. 2. Our air is pure. While we have an abundance of vegetation, it seldom decays on the ground, but is burned up by annual fires. Vegetation is growing perpetually, and drinks up noxious gases, and constant sunshine and sea breezes all combine to make the air pure. 3. Pure water for house use. No boggy swamps nor stagnant water in the country. 4. A mild climate, never too hot or too cold, so everyone has the full benefit of pure air, free from exposure. It is no wonder that we have never had an epidemic of any kind, and that the fatal diseases incident to children and adults, that are so common in other localities, are seldom known here. In the most of countries, one half of the population die under five years of age, while a death among children in Lee county is quite rare.

FROM FLORIDA.—I send you a registered package of onions and oats. Any kind of onion does well here, from the seed. Sow in drills from July to January, and when big enough, thin out and transplant, as they need but little cultivation in our mellow soil. The Silver King, Rocco and some other varieties grow to an enormous size and weigh from one to three pounds, being too large to suit the market. These I send you are the white Bermuda of medium size. There is not much difference between the white and red Bermuda, except as to color. They are the proper size for sale; sweet, mild and good keepers. I have raised at the rate of five hundred bushels per acre on our fine lands. They sell here at ten cents per pound and are said to be worth more in New York, as they come in when onions elsewhere are scarce. About half enough are raised here to supply our own market, as we have but few people engaged in agriculture and horticulture, and they are busy pushing a fruit grove, and what time they have to spare is used in raising tomatoes, cucumbers, beans and egg-plant for the northern market; that pays better. I have not measured these oats I send, but they are over six feet high and grow without fertilizers. Of course it was on our best lands, and we have plenty like it. You cannot pick out one hundred and sixty acres but what has more or less of this rich land on it. I saw by the northern papers that the mosquitoes are making it lively and a big crop expected. We look for them here about June 10th and expect them to remain about sixty days. Our weather is delightful; mercury about from sixty-five to seventy degrees in the morning and up to eighty at noon, with occasional showers. Tourists come and go all the year, as our summers, like all other countries, are more healthy than our winters. We have about two thousand people in Lee county, and have had nine deaths and over forty births since May 31, 1890. L. C. W.

Fort Myers, Lee county, Fla.

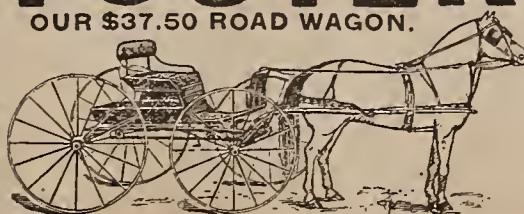
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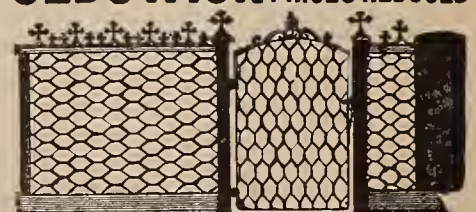
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When we shall not think, in anxious mood,
Of the needs unsatisfied.

When we shall not fret and worry and screw,
For the sake of saving a dime.
We can buy the dress, and the bonnet, too,
Indeed, two frocks at a time!

When we shall not sigh that the flour is out,
Or the coal disappears so fast;
When the time that Johnnie's shoes must be toed,
And his trousers patched, are past.

We can meet the wants of a suffering friend,
Without undue look to our own.
We may lift the feet that stumble and bend,
Without heed lest we trip on the stone.

For a better use of the "filthy stuff"
We could make, than Brown or Gray;
And we'll have—a little more than enough
In that coming time—Some Day.

O brilliant castles we never behold!
O day with never a dawn!
For most of us fight clear out to the end,
And die with our armor on.

But the dream of that wonderful, far-off time,
That ever-fair to-morrow,
Helps many faint heart do braver part,
Bearing to-day its sorrow.

—Eva Lovett Carson, in the Housewife.

SISTERS, BUT NO KIN.

BY MARY TWOMBLY.

CHAPTER X.

DR. NOEL ASHMEAD, as one looked at him that summer day, attired in his carefully careless yachting suit, his gray, summer surcoat flung across his left arm, and the jaunty holiday air of his whole person struggling with the bored expression now settling upon his fastidious countenance, was a very noticeable personage. The frame-work within which he stood and gazed upon the hurrying passers-by was very much at variance with the picture it enshrined, for Dr. Ashmead had caught at the first friendly shelter from a drenching summer shower, and his aristocratic figure now reposed against the outer doorway of a shoe factory in an old seaport town of Maine.

He had been standing there perhaps five minutes when a young girl, pausing from exercise and dripping wet, entered the same doorway, gave him a quick, surprised glance, and ran up the flight of steep steps behind him. Before she reached the top, a door above opened, another female head protruded thence, and a sharp, treble voice, pitched above the rattle of machinery, inquired:

"Did you find him? Is he coming?"

"No," replied the first girl, "and I've been to two or three other places, and I can't find a doctor at home in this end of the town. Oh, dear, I'm so tired, and soaking wet!"

"Dear, dear!" cried the first speaker in dismay. "What shall we do? Mr. Todd! Mr. Todd!" she called. Then the clatter of voices and machinery went on for another minute, at the end of which time a man, presumably Mr. Todd, emerged from out the same door, banging it behind him and muttering aloud as he came down stairs:

"Drat it all! No one but a woman would have such a thing happen to 'em. To be sent scurrying the town for a doctor and can't find one. They're plenty enough, Lord knows, when they ain't wanted."

Dr. Ashmead slowly turned his head till his cold gaze rested full upon the work-a-day face of Mr. Todd. "What has happened?" he asked, indifferently.

Mr. Todd surveyed for an instant the elegance of the stranger's figure with about the same curiosity he might bestow upon a captive butterfly; then, with a comical grin, said:

"Well, 'tain't nothin' unusual, mebbe you'll

think. A woman upstairs has got her mouth open an' can't shet it. But the curus thing about it is she can't talk with it open; seems to have sprung apart and locked itself at the same time. The rest of 'em are skeered about out o' their wits, an' there won't be a stroke o' work done till a doctor's got."

Dr. Ashmead had taken out his watch and noted the time while Mr. Todd was speaking.

"I am weather-bound for the moment," he said, at last, "and if you will lead me to the woman I may be able to save you a further journey. I am a medical man."

"You don't say? Well, I never should have thought it," began Mr. Todd; but an imperious gesture silenced him, and he led the way.

At sight of them the noise stopped as if by magic. The doctor's keen eye took in every detail at once, and waiving all explanation he walked straight over to a silent buttonhole machine, from the plate of which the "upper" of one boot hung with a forlorn droop. A girl sat fronting it with arms crossed in her lap, mouth wide open and large, blue eyes fixed in vacant and stony terror. The rest of the features seemed to be in a sort of eclipse.

"A towel, please," said the doctor to the attendant forewoman.

Having received it, he placed it, folded several times, between the girl's teeth, then deftly applied a thumb and fore finger to each side of the jaw, inside and out. After manipulating a minute or two with steady strength, the teeth came together with a snap, which the folded towel prevented from doing any damage. Quickly drawing the towel away and casting it aside, the doctor looked fairly at his patient for the first time.

The mouth was now, quite appropriately, making a first use of its restored functions in an effort at thanks. It was certainly a pretty

"It was after dinner, and one of the girls brought in some apples. I took up a large one, and just for fun, on a bet that I couldn't do it, fastened my teeth in it for a large bite. Then another girl, just for fun, grabbed at it with all her might. She took the apple with her and left the piece between my teeth, and—and my mouth stayed in just that way until you came in."

If the ludicrous picture he had seen worked any mirth in his mind he gave no sign of it. While she talked he continued to study her face with grave curiosity. His profession had many times before brought him into contact with persons of her condition, but of her kind, not exactly. She seemed to him somewhat of a new type. While she spoke and stole half-ashamed glances at him, he was mentally summing up her characteristics somewhat in this wise: "Naïve, yet very self-conscious; ignorant, yet by no means vacant of mind; much self-conceit mingled with a curiously deprecating manner of showing it." With her fresh, changeable color that defied the leathery atmosphere about her, she seemed to him too curious a specimen to dismiss with a glance. "I'm afraid it will happen again," she said, throwing another appealing glance into his face.

Dr. Ashmead smiled into her eyes at this. He thought them the very bluest eyes he had ever seen.

"Oh, no; you need fear nothing of that sort. Only let me advise you not to experiment in that way again." Then, in a lower tone, "What is your name?" he asked.

"Almeda Poore," she answered.

"And your address?" dropping his voice still lower. "I may be detained here till to-morrow, and if so, may look in upon you again to see that all is well with you."

confoundedly stuck-up one," struck in a third girl. "He might bestow a smile or even bow on the rest of us without hurting him, as he went out. I wouldn't give much for any poor girl's chances of honest intentions from one like him."

"I agree with you," said the forewoman. "He has served one timely attention for you, Almeda, for which I'd advise you to thank your stars and forget him."

Almeda, who, though still a trifle hysterical, was rapidly coming to her usual state of self-sufficiency, bridled a bit at this. "I'm sure I don't see why everybody has so much to say about it. I'm sayin' nothin', and I seem to be the only one that ain't sayin' somethin'," she observed.

"That's no more than fittin' modesty on your part; heroines can afford to be modest," said another girl. Then they all indulged in a giggle.

Almeda reddened. "I'm sure I wasn't thinkin' o' chances or attentions after the scare I've just got," she said; "but when it comes to talk o' that sort, I expect one person's as good as another, 'cept the difference o' money."

"That's about the sentiments o' most of us that haven't money, only, unfortunately, them that have it don't quite agree with us," laughed the forewoman.

"There ain't many of us so odd, I guess, but what we have relations that have money, and they can tell us how them that have it feels; so we needn't be so ignorant of their state o' feelin' as some people may think," retorted Almeda.

"If that's meant for me, I'm quite willing to confess that I haven't a very rich relation in the world, and I don't know as I'm a mite worse off than them that have lots o' them," observed the forewoman, philosophically.

"Well, whether it turns out bad or good for me, I can count more than one rich relation," answered Almeda. "My father has an own cousin that ranks among the rich merchants o' New York."

"Has he ever invited your father to his house and made much of him?" inquired the forewoman.

Almeda did not deign to answer, but another girl replied:

"Oh, that question counts for nothing. I have well-off cousins in this very town; I have two among the learned professions, as they call them, but they never invite me to their houses. They know me when we meet on the street and elsewhere; we nod; I hold my head as high as they, and there the matter ends. But please tell me why I should not think myself as good as they?"

"You are as good if you can prove your claim by your own exertions or the exertions of somebody else. The great trouble with you girls when you go to comparing yourselves with everybody else is, that you lose sight of the important fact that people of means and leisure have the opportunity of learning no end of things

that you know nothing about, except what you learn by report; and that, as a general thing, only muddles ye and fills ye with conceit. If some chance put ye suddenly among them you'd feel yourselves as much out o' place as a cat in a strange garret. No matter about yer right to be there, or yer goodness, you'd feel awfully out o' place, that's all. If some of ye tried to fit yerselves for any place ye might happen to fall into, instead o' dreamin' o' impossible pieces o' luck, and the figures you'd cut after it happened to ye, it would be more to the purpose."

Having delivered this homily, the forewoman walked off. The girl next to Almeda made a grimace at her back, and muttered:

"Disappointed old thing! She knows there's no impossible pieces o' luck for herself, and so she's bound to throw cold water on other people's possibilities."

"That's so," affirmed Almeda.

"Look here, Almeda," called out another girl, "what's become o' that girl that was picked up and used to live with your folks when she was little—her that one of the girls read something about in the newspapers and then told us all about one day?"



"THERE IS YOUR WIFE, MY BOY; TAKE HER!"

mouth. The lips upon which the words faltered were delicately full and tremblingly mobile. But the thanks were more eloquently expressed by two great tears that started as she looked at him, and trickled slowly down her cheeks.

Then Dr. Ashmead made a movement which might have surprised himself had he stopped to think at all about it. For a young man he was singularly free from emotional moods, especially at the wrong time or place. Some of his friends, indeed, went so far as to question whether he could ever be betrayed into emotion. He had witnessed suffering in many forms, and he had an invincible repugnance to it in all its common forms. Indeed, he recoiled from commonness in every form. Nevertheless, he now took from his breast pocket an immaculate linen handkerchief, carefully wiped off those two thankful tears, and as carefully deposited again the handkerchief in the same breast pocket.

"How did it happen?" he asked, in a tone of sympathetic concern, and with a glance that said more than the tone.

The embarrassed girl's fascinated gaze drooped as she explained:

"Oh, thanks," she said, with delight, only too visible; and drawing forth a small, leather pocket-book, she took thence a card which she handed to him, with a bill, whispering:

"Won't you pay yourself, please?"

"No, no; never mention that again," he said, ignoring the bill and hastily pocketing the card, while he took his hat and bade her a kindly good-by; nor did he vouchsafe one grateful glance to the array of upturned faces that curiously watched his departure.

No sooner had the door closed upon his descending form than a very chorus of congratulations descended upon Almeda. Restoration of her pretty mouth to its normal condition was hardly considered better luck than that this restoration should be due to the unlooked-for interposition of so charming a stranger.

"I envy you, Almeda," said one girl. "It's like the 'Sleeping Beauty' in the fairy story being brought to life by her beautiful prince. It was easy to see how interested he was, and it's easy enough to guess it won't end here."

"You'll keep us posted how your romance, so beautifully begun, progresses, won't you, Almeda?" said another.

"He may be a prince charming, but he is a

"Oh, she's doing just the same—living with her grandmother," answered Almada, with brief indifference.

"She's a case o' what I call luck," continued the same girl.

"I don't see it in that way. Her's was only a case of being lost and finding her way back home, I should say," struck in another speaker. "I heard you went there—I mean, hunted them up in Boston—not long ago—Almada," she continued.

Almada threw her head back laughingly for a moment, as she lifted it from her work. Each of the girls spoke hurriedly during brief pauses in the clatter of the machinery.

"I wrote them," she said, "and afterwards called there. I stayed just as long as I wanted."

With this proudly evasive reply Almada relapsed into silence and went on with her work, and her companions for a time let her alone.

The rain had ceased and the sun reappeared in all its glory, as if to give a last benignant smile upon the closing day. Dr. Ashmead wended his way to his luxuriantly-appointed yacht, which about a week before had left New York City with a band of friends to cruise for the next few weeks about the coast of Maine. Lighting a cigar, he took the girl's card from his pocket and looked at it with an amused smile. "Almada Poore, 95 Fleet street."

"Good heavens! It must be the very eldorado of democracy where people of that order carry their *carte de visite* with them to the workshop," he laughed. "Almada Poore—poor Almada! Well, my dear, despite the very plebeian sound of your name to-day, you may be a veritable descendant of some De La Poer among the stout robber aristocracy of Norman days. But however that may be, you'd make an interesting psychological study, of that I am certain, if only a fellow had time to devote to you. Gad, it's a queer arrangement that allots a pretty child like that to spend the flower of her days in yonder murky den," he added, looking back at the dingy building.

Could Dr. Ashmead have looked in upon the inmates of "yonder murky den" at that moment, he would certainly have exonerated them from indulging in the self-pity that he fancied must be their chronic lot. Could he have listened to their comments for half an hour after his departure, it might have added something to his already large stock of useful knowledge. He could recognize at a glance the city shop girl, whose experienced eye could rate at its proper value the admiration she was likely to receive from one of his culture; but her sister in the interior, who believed herself fitted by divine right of a straight Yankee pedigree to fill any position in the land, was an unknown quantity to him.

That evening the doctor kept his word and looked in upon her. A week or two later she discovered, with joyful surprise, that he had made convenience yield to inclination, and sailed his yacht up to Oldport again. On the second occasion he made it convenient to see her many times, and left, promising to come again and again. Indeed, in language most fascinating to the simple Almada's ear, Dr. Ashmead made it clear that an acquaintance so strangely begun was one not destined to come to an end. To vulgar, matter-of-fact promise, he did not commit himself, but no saint ever felt surer of heaven than Almada of his love. She lived in an enchanted realm, which this man was the first to open to her vision.

CHAPTER XI.

ESTHER and Cazenove continued to meet as usual, but they exchanged no more than a friendly greeting. The formality of their greeting was noticeable to more than one of their friends, and especially so to Esther's aunt, Mrs. Robert Reignold. That lady observed but made no comment. The artist continued to frequent her house and so did his uncle, who found the ease and geniality of the hostess a great recompense for the loss of many friends he had known in days of yore. The old gentleman felt himself to be much like a stranger in his native city, for although many knew him, few were left with whom he had held personal relations in his youth. He liked to talk with Mrs. "Bob;" he found her such a sympathetic listener.

Going into her aunt's one morning a few weeks after Almada's departure, Esther met the old gentleman coming out.

"My dear," he said, grasping her hand, "this meeting is as opportune as if it had been fore-ordained. I was just telling Mrs. Reignold that I was going to see your grandmother before many hours; that I would not put the matter off another day."

"See my grandmother," repeated Esther, in amazement.

"Why not?" asked the old gentleman, smiling at her surprise. "I have called on her already, but she was not to be seen. But I want a word with you first, my dear."

Esther led the way into the parlor.

"My dear girl," he began; "I am entirely in my nephew's confidence. I know that he loves you and what it is that prevents him from declaring his love openly. He recognizes your grandmother's right to demand for you a man of wealth sufficient to support you in the condition of life you are fitted to adorn. Justice to you and self-respect alike have kept him silent. Some day you will know all. I am prepared to deal with your grandmother. I have begged Harry to let me do so. Now I want your consent. Shall I go to her?"

Esther was greatly agitated.

"I don't know; I fear it will be of no use," she faltered.

"You fear! That is well. God bless you my dear; now leave the rest to me."

That afternoon Madam Reignold had just returned from a drive, and was just entering her own door when the sound of a brisk footstep made her turn and she came face to face with old Mr. Cazenove. Surprise for a moment, then recognition, a sharp exclamation, and the old lady retreated within doors.

"I am sorry, madam, to startle you," he said, lifting his hat courteously, "but being so unfortunate as to miss seeing you on my first call, I made sure of seeing you this time."

She walked into her drawing-room without speaking and sank into a chair as if she needed its support.

"I have to beg your pardon for taking you by surprise," said her visitor, seating himself opposite, "but it was imperative that I should see you."

"Why imperative?" asked the lady, assuming with an effort her perpendicular bearing and vouchsafing a cold glance at her visitor.

"Because I have a matter to settle with you Madam Reignold."

"I have lived for many years under the impression that all matters had been settled between you and I, Rignald Cazenove."

"So they were, Adelaide, but that settlement did not cover all earthly things in which you and I might have a mutual interest."

"Although you seemed to feel at the time that it would," she retorted promptly, her proud old lips puckering into a sarcastic smile.

He smiled too, but kindly, reminiscently. "I was a good deal of a fool in those days, Adelaide; you cannot possibly realize that better than I realized it myself a few years after I was the dupe of my own delusion."

No woman is ever so old as to hear with composure the man that once loved her confess himself the dupe of his own delusion in having loved her, and Madam Reignold winced even as she said with a laugh: "That no doubt greatly quickened your recovery. I confess I was surprised upon hearing how soon you were able to marry another. I even remember wondering at the time if your second love-making was as vehement as the first; for you may recall having treated me to some hysterical scenes, Rignald?"

"Yes, I can quite recall it. The putting out of a fire by the drippings of ice is likely to create more or less splutter and smoke. But the first generally retains a rekindling spark, and even its ashes may be eloquent, while the ice drips itself into final disappearance."

"You always had a pretty talent for poetic simile. You retain your faculties wonderfully well," she said, with quiet mockery.

"My second experience was very different," he continued, not heeding her. "I had to deal with a living, loving, uncalculating woman. The only injury she ever did me was in dylug too soon."

"Ingratitude was never one of your faults, Rignald. And she left you a fortune, did she not?"

"Yes, quite a respectable one, though I made a larger one myself."

"What a pity that she died without leaving a child. That's a trick those angelic women seem prone to play, as if they feared to duplicate themselves lest the type should become common and less appreciated," pursued the ancient dame in the same tone of subdued mockery.

"When Providence rules thus, Adelaide, it generally provides in another way," continued her visitor serenely. "I am not without an heir, and might have had a son that I could be less proud of than I am of Harry Cazenove, in whose behalf I am here to see you."

Madam Reignold began to grow excited. She almost rose from her chair as she asked: "What possible connection can I have with Harry Cazenove's interests?"

"Merely this," pursued her visitor. "Harry Cazenove loves your niece; she loves him; you have feared to let them meet on account of his poverty."

"You presume a great deal by saying my niece loves him. I do not believe it. She has not deceived me," said Madam Reignold, rising.

"Pray be seated," continued her visitor calmly.

"Sir, I am in my own house. It is my place to end this interview when I feel I have heard enough."

"That is true, madam, but I have come here to be heard and I shall be heard, even if I have to follow you to your own boudoir. Your mercenary calculations triumphed over me once; they triumphed over and hurried into her grave your daughter; they shall not mar the lives of two others."

"My granddaughter cannot have deceived me; she does not love him," persisted the old lady.

"No, she has not deceived you, she has kept true to the letter of your command; but your command could force no lock and key for her heart; she loves him."

"How do you know. Has she told you so?"

"Not in direct words; when I put it to her she tacitly admitted it. I could not come to you to urge my nephew's claims without some concurrence on her part."

"Did she consent to your coming?"

"Tacitly, as I said before, she only expressed a fear of its uselessness."

Madam Reignold heaved a sigh of relief and drew her lips into a pained smile.

"I am glad Esther understands me. It is useless," she said, and moved towards the door.

A long stride or two and the old gentleman had preceded her, and placed his hand upon the door knob. "I have told you you shall not triumph over me," he said, facing her; "you do not leave this room until you have heard me out. What possible charge other than lack of means can you bring against my nephew that unfits him to be your granddaughter's husband?"

Madam Reignold placed herself at bay. She looked very angry. "I do not desire a Cazenove connection," she answered.

"You did not feel thus half a century ago. You seemed proud of the connection, until my father's sudden loss of fortune."

"Half a century, Mr. Cazenove," cried the old lady, quivering with anger, "allows great scope for change in one's point of view. It may enable one to see the desirability of connecting oneself only with people who have never lost social footing, with people who have been able to stand well to the front and maintain fortune and prestige unbroken."

"You cannot evade my question by a resort to insolence, madam, and shallow lusolence at that. The fortunes of all families in this country break and rebuild again. That is one of the features of our land. Fifty years or more ago your father stood nearer to the founding of his family fortunes than you do now and was proud of the Cazenove connection, rightly remembering that the Cazenoves were gentlemen, men of means and culture, when his grandfather was a fisherman along the Cape Cod coast. Nay, do not bridle into rage; your rage is impotent. I ask again, what charge have you against my nephew and heir?"

"Do you really suppose I want to see Esther married to a man whose only calling in life is to dabble in a paint pot and scrape a palette?" she asked.

A low, derisive laugh from her visitor. "Madam," he said, "I regret to see you have not lived up to your opportunities, kept in touch with the spirit of your latter years. What you say might have had some weight in your early days. My father could remember when to paint was looked upon as well enough for an idle fellow favored at a King's court or petted by nobles whose portraits he painted, but beneath the thought of serious-minded men. My grandfather could remember when to play an instrument was considered unmanly and effeminate; his father might remember when to write a poem was a stamp of worthlessness, and so on, per order of the British Philistine from whom you have descended and whose instincts you so faithfully preserve. But all that has changed. The British Philistine grown rich, traveled and observant, now pays thousands of pounds to grow the arts at home, but not as yet with very remarkable results. But enough of this. Harry's calling is now no stigma, even among the Philistines. Your granddaughter loves him. I do not think she would ever create a sensation by making a clandestine marriage, as did her lovely but more yielding mother, and I am quite sure Harry loves her too well to ever ask it. Esther has a great deal of strength, of patient endurance. But she will never marry to suit you. She will treat any man of your choice as she did Alton the other day. She will live unmarried till you have passed beyond the power of coercing her and then she can please herself."

"You are in my house, sir, by right of physical force alone. Make the most of your opportunity. It is not likely to occur again, and let you insult me and forecast the conduct of my granddaughter."

"I do not think that will be necessary. I can put it to the test now," he said, pulling a bell, while the strained eyes of the old lady followed his movements. A servant responded to the call. "Has Miss Wynu returned?" he asked.

"Yes, sir; she is in her own room."

"Please ask her to come here?"

Esther came in, looked from one to the other, noted the anger and bewilderment in her grandmother's face, and grew a shade paler.

"Do not be disturbed, my dear, said Mr. Cazenove; your grandmother and myself have had a plain talk as befits two old people who have known each other well. I have told her that even according to her standards I am a wealthy man, that Harry Cazenove is my heir, that he loves you and asks for your hand. She can find no charge against him, yet refuses her consent and refuses to believe that you love him. Am I asking too much to press you to speak the truth before your grandmother?"

While he was speaking the servant reappeared and handed him a card. "Tell him to wait outside a moment," he said as he glanced at the card and thrust it into his breast pocket.

"Grandmamma," said Esther, "Mr. Cazenove tells you what is true. I do love him. Harry Cazenove is the only man—"

A groan from her grandmother made her pause. "I have told her that you would not be likely to do anything sensational or openly disobey her, but that if you could not marry my nephew you would marry no one else."

"It is true," said Esther with quiet firmness. Old Mr. Cazenove opened the door, strode out into the hall and returned with his nephew by the arm. The old man's face was full of triumph.

"Harry," he cried, "Madam Reignold has

exhausted her wit in searching out a plea upon which to refuse you. She can find none. There is your wife, my boy; take her!"

It did not take Harry Cazenove long to respond to that call, cross the room and regardless of witnesses and her own deprecating gesture, have Esther in his arms.

Madam Reignold was so overcome that she actually allowed the elder Cazenove to lead her from the room, and the lovers were alone together, to look into each other's eyes and speak their unrestricted love for the first time in their lives. And they had much to tell each other. The long-enforced repression only made the outpouring of confidence more complete, the revelation of faith in each other the more unbounded.

At the foot of the staircase Madam Reignold and her old-time lover parted. She bewildered with conflict, he with an elaborate bow and beaming with satisfaction. For the first time in her long life the old lady felt that she had been completely beaten out of her own entrenchments, defied, trampled upon, and that by a man whose broken-hearted face as he last left her presence, had haunted her for years. During all these shortcomings of her subsequent marriage—which was as nearly loveless on both sides as it was prosperous—the abjectness of that man's love for her was a triumph she liked to recall. She did not want him penniless, of that she was certain, and yet when she heard of his marriage several years after, she felt sorely chagrined. Before that event she enjoyed the fancy that whatever space divided them he would forever and ever remain a sort of ideal slave to her memory; nor had his marriage wholly dispelled this fancy. And to-day he had brushed her aside as a thing of naught in her own house, and in the persons of Esther and his nephew completely avenged the miscarriage of his own suit more than half a century ago. Opposition now, she felt, would be useless; the more so that society would now be sure to approve the match.

CHAPTER XII.

IT was a few days before Christmas the following winter, and Harry Cazenove and his wife had returned from Europe, whither they had gone immediately after their marriage the September before. They were staying in New York for a few days, where both had many friends, and a party in their honor was to be given that week by Miss Clara Ackerman.

Miss Ackerman had just returned from a shopping expedition, and before removing her wraps went hastily into the dining-room to give some directions to the butler. Having done this, she looked expectantly out of the window, which commanded a long view of the street, and casually noticed that a young girl paused beneath, looking wistfully and inquiringly up at the house, and then slowly passed on. She vaguely wondered who the girl was or what she wanted; then went upstairs and forgot her.

Miss Ackerman was a New York belle who had passed her first youth without being relegated to the ranks of old young-ladyhood. Her cheek was still soft and round, no lines marked her forehead, and her complexion was as clear as ever. In repose, her face wore a pensive, repressed look and her eyes seemed a trifle weary, but in conversation her whole face would become brilliant and varied in expression.

Some years back, while she was yet a debutante, Dr. Noel Ashmead, then entering upon his professional career, had paid her marked attention. Everybody thought it would lead to an early engagement. But it did not; nobody knew why. The attention declined, but never left wholly off, and finally Dr. Ashmead went to pursue his professional studies in Europe. Miss Ackerman, meanwhile, continued to receive plenty of attention from others, but showed no disposition to smile permanently upon any one. Dr. Ashmead returned, and soon again established himself in the same old easy footing. Friends again looked for an engagement and again gave it up, and finally came to the conclusion that neither Dr. Ashmead nor Miss Ackerman were matrimonially inclined. The lady's position was an independent one. She was the only remaining daughter of her father's household, and he was wealthy and a widower.

Having rested half an hour, the lady again returned to the dining-room. Her hand was on the bell-knob to ring, when, glancing out, her eye encountered the form of the same young girl, sitting on the doorstep and looking, she thought, dejected. A sudden determination came to her; she quietly opened the hall door and bade the girl enter.

The latter sprang to her feet and looked at her hesitatingly. The color rushed to her face and ebbed away, leaving only a nervous pallor. "Yes, I did want to speak—that is, I wanted

FOR SCROFULA

and for
the cure of all
scrofulous diseases,
the best
remedy is

Ayer's Sarsaparilla
Cures others, will cure you

to know something. Are you Miss Ackerman?" stammered the girl.

Miss Ackerman was touched. "Come in," she said, looking into the girl's face reassuringly. "Come in and tell me what you want; tell me everything and I will help you if I can. Did you ever see me before?"

"Yes," answered the girl, still standing beside the chair proffered her. "I saw you yesterday coming out of church. I stood outside to watch the people. Dr. Ashmead was with you. I heard them say he was engaged to you. I saw the same thing in a newspaper some time ago. I wanted dreadfully to know if it was true; please tell me?"

Surprise for a moment held the elegantly self-possessed Miss Ackerman speechless.

"It is not true," she answered at last; "but what possible interest can you have in asking?"

For answer the girl threw herself into the chair and wept hysterically. "Oh, I'm so glad, so glad," she kept repeating. Then, turning confidently to Miss Ackerman: "You don't care for him at all in that way?" she asked.

The lady recoiled. "My good girl," she said, "you ask extraordinary questions, and you have not yet told me why you ask them. What is your name?"

"Almeda Poore," she answered, looking up and showing plainly that she did not relish the sound of "my good girl," as it came through Miss Ackerman's polished intonation. "Yes, I am a good girl. Perhaps you didn't think so at first. I'm poor; I work for my living and maybe I don't know as much as some, but I am good."

"I am very glad to hear that, Almeda. At the same time, you must know that your errand looks questionable. Of what interest is Dr. Ashmead's engagement to you?"

"Nothing, maybe—or all the world."

Miss Ackerman's eyes dilated, and she surveyed the girl anew.

"I don't want you to think," Almeda went on, pressing her hands hard on the chair, as if to hide their trembling, "I don't want you to think that I speak to any one else like this. No, indeed, I don't invite people to laugh at me, and that's what they'd do if they didn't understand. But you are different. The minute I saw you I felt I could trust you. Supposing there was something that was life and death to you, and there was one person who could tell you whether you had better live or die—well, that's my case."

Miss Ackerman was greatly moved. "My poor girl," she said, taking both delicate hands in her own, "how came you to get into this state? Surely, Dr. Ashmead never made you think that—that—"

"That he loved me? Oh, yes he did, in a thousand ways, in every way, and I know he did? Why did he inconvenience himself to see me? Why did he want to know me at all, to get at everything I ever felt or knew, and act as if it weighed more than all the world with him. Why did he come into my life at all? I never invited him there—never at first."

Miss Ackerman began to grow dizzy. "Did he ever tell you so?" she asked, closing her eyes.

"In many ways, in every way, except just the plain asking me to marry him."

Miss Ackerman shivered. She understood the girl, the distinction she meant to convey. Never in her life had she felt so inexpressibly small and mean.

"Poor Almeda," she exclaimed, pressing the girl's hands. "Tell me when and where and how you met him."

And Almeda told. "And you have been waiting since that last time to see him?"

"Yes, he told me he would come, and I have heard from him once," and she produced a small note and handed it to Miss Ackerman.

The lady read it and turned paler. She rose hastily and paced the floor, loosening the delicate lace jabot at her throat as if it were choking her. That delicate, tender, non-committal, effusive epistle might have dropped from her own secret stores any time during the last seven years.

"And you would like to see him again, Almeda?"

"Yes."

"And you think perhaps he still desires to see you, but for some good reason cannot?"

"If I could see him, then I could make sure. If I could only see him without his knowing that I came on purpose."

While she spoke Almeda's fresh young color changed like the variable radiance of an opal. Miss Ackerman regarded her with a commiseration born of accurate knowledge.

"I understand you, Almeda," she said, "better perhaps than you do yourself. You shall have your opportunity. Stay with me for the present."

There was a certain power about this woman which Almeda instinctively yielded to, inasmuch that she fell in with her plans without question, and promised that on the night of the party she would assist Miss Ackerman's maid in waiting upon the ladies as they arrived. It promised to be a splendid affair. In helping on the preparations, Almeda felt herself a part of it, and in a measure forgot the soreness of her own feelings. Miss Ackerman did not specify who was coming, nor in whose honor the affair was being given. When the night came, Miss Ackerman had Almeda's dress in tasteful simplicity, not like a servant, nor yet too obtrusive for the role she was to fill, and as Almeda looked at herself in the

glass, she became fully conscious that it was no ordinary-looking girl that met her view.

As she stood thus before one of the great mirrors, a noise at the door announced the first arrivals, and a group of gentlemen were ushered to the dressing-rooms above stairs. At the same moment Miss Ackerman, in splendid attire, glided into the room, holding a handsome opera cloak on her arm.

"Almeda," she said, handing her the cloak, "take care of this till I want it. It may be chilly later on, and when I ask for the cloak, do not let Susan bring it; bring it yourself. Meanwhile, you may hang it in the wardrobe, between the two dressing-rooms. Now go up, for the ladies will begin to arrive rapidly."

Almeda did as she was bidden. The wardrobe in which she hung the cloak was in an ante-room which divided the two main apartments, and she noticed that the door of the gentlemen's dressing-room was ajar. Two of them talked as they stood before a mirror, and the sound of a well-known name struck her ear. Involuntarily she listened.

"Ashmead isn't here yet. Of course he'll come," said one.

"Of course. Would you have a play with the hero left out? They say the affair is likely to be announced soon."

"Report has said the same thing periodically for the last decade."

"But of course it will happen some time. You notice that after each aberration in favor of some new light, Ashmead comes back to the old flame with renewed devotion. Miss Ackerman is a splendid woman. There is nothing of the patient Gruselda in her looks, and yet she does not throw him over. Why don't such women use their power?"

"Ask me something easier. There's something caddish in Ashmead after all. Did you hear of his hanging around a little girl down in Maine last summer? No? Oh, I don't know the ins and outs of it all. One of the fellows that was yatching with him went to tell it at the club on their return home, but Ashmead took high moral ground and silenced it—seems he was only making platonic observations. Dash the fellow! If he turned frankly profligate, one could understand him easier. If he has discovered a new charm in a woman, he'll set himself to vivisection it, to discover its source, with no more thought of the victim's feelings than if he were one of the vampires of old story."

"Or like the great Goethe himself, eh? Strange that such fellows have such power to fascinate women and never deceive men." Here the entrance of others put a stop to the subject.

Almeda's heart beat wildly. She had heard and understood too much for her own comfort. While she listened she heard Susan calling to her. Several ladies had come in together. Mechanically she went back to the room and stood gazing about her.

"Why don't you help take off the ladies' things?" asked Susan sharply.

"Young woman, come here and unfasten my cloak," called a stout lady, who had been tugging away at its fastenings.

Almeda awoke at the summons. Having removed and laid aside the cloak, she next took off the gossamer head-covering and began touching up the slightly disturbed frizzes.

"That is not the next thing to do," said the frowsy-faced dame. "Take off my overshoes;" and she held out a fat foot. Almeda stooped to remove them.

"If you'll get on your knees you'll find it easier," cried the dame impatiently.

Almeda did not kneel. Giving the lady one burning glance, she drew off the shoes, cast them with the cloak into a little heap, and turned her back upon their owner. "Shall I assist you?" she asked of a pleasant-faced young girl.

"Thank you, yes," replied the latter, standing still to have her wraps removed.

"Are you Miss Ackerman's own woman?" asked the elder dame, as she stood before the mirror adjusting her ruffled plunage.

"I am nobody's woman, madam," answered Almeda, again turning her back, while the young lady bit her lip and drooped her eyelids to conceal her mirth. After this Almeda got on better with her new duties, but her heart was sore with indignation and chagrin.

"Susan," she cried, after the later hatch of arrivals had descended to the drawing-rooms, how can you endure this sort of life?"

"Oh, I've got used to it; it has its good sides," replied Susan.

"But those people look upon you as a sort of machine, that's all."

"They don't make much allowance for the fine feelings of them above their station, that's a fact," said Susan.

The woman's acceptance of things as they were was more than Almeda could brook just then. She left the room and seated herself in a little alcove above the stairway, where she might remain unseen and yet catch a glimpse of the dancers.

By and by a couple came out during a pause in the dancing and seated themselves at the foot of the stairs. It was Miss Ackerman and Dr. Ashmead.

"Aren't you afraid you will catch cold here, after dancing?" Almeda heard him ask.

"You may, if you will, go to the tube and ask to have my wrap brought down," she answered.

Instantly, the significance of Miss Ackerman asking her to bring down the cloak flashed upon Almeda. "Yes, I'll come face to

face with him though it kills me," she thought. Holding the garment before her, she slowly descended, and spread it over Miss Ackerman's shoulders.

"Thank you, Almeda," said the latter, looking into her face with a pleasant smile.

For a moment Dr. Ashmead stood perfectly still. He was too well trained to make his amazement visible. He looked from one to the other inquiringly, then spoke.

"Is it possible I see the same young girl, Almeda Poore, whom I met so opportunely last summer?" he asked, holding out his hand.

Almeda feigned not to see the extended hand, and it dropped gracefully on the balustrade. "Yes, Dr. Ashmead, it is the same girl," she answered, her face deadly pale.

The gentleman turned to the lady. "How came you to get Miss Poore for your maid?" he asked.

"She is not my maid. She came to town to find something to do; I chanced to meet with her and induced her to come and help me out on the present occasion."

"Very fortunate for her," he said, with the careless good-will he might bestow upon a stray kitten. "I fancy Miss Poore will be very glad to stay with you—that is, if you need her."

Almeda turned to Miss Ackerman. "Is that all?" she asked, huskily.

"All, Almeda. Go upstairs and rest, child," she said, with a look of protective kindness that did not escape her companion. Almeda reached the hiding-place above as quickly as her trembling limbs could carry her, and hid her burning, tearless eyes in her icy cold hands. The rich, sensuous music went on; it seemed to bathe her very soul in pain.

"How came you to know Almeda?" she heard Miss Ackerman ask.

"Oh, the merest hit of professional circumstance. She met with the oddest little accident in a factory where she worked, in the doorway of which I stood at the time to escape a drenching shower. It was during my yatching season last summer."

"I wonder you remembered her again from such a slight circumstance."

"Oh, men of my profession always remember faces, and she has a very noticeable one; besides, I am a bit of a student in that line."

"In faces or hearts, or in seeing how both correspond?" asked his companion, flashing upon him the strong glance of her searching eyes.

"Don't indulge in the vulgar weakness of imagining such stuffs occurs to commonplace women, Florence," he said.

"Oh, I don't," she answered, with a low, mocking laugh. "Do not fancy that. Let us go back again into the drawing-room. My dear Esther," she cried, as she discovered Esther and her husband ascending to the rooms above, "how late you are. I began to fear you were not coming, that something had happened." And then there followed several greetings and congratulations ere Esther could escape to remove her wraps.

At the sound of Esther's voice and her approaching footsteps, Almeda sprang from her hiding-place like a wounded animal from its lair, and stood before her. "Esther, Esther, Esther!" she moaned, and fell senseless in Esther's very pathway. Cazenove was beside his wife in an instant, and lifting the inanimate form of Almeda, carried her to an adjacent ante-room and laid her on a couch. Then he called Miss Ackerman, who was, of course, followed by Ashmead.

Surprise, question, explanation followed in rapid succession. Miss Ackerman, true to her generous instincts, made out as good a story as possible for the girl that was a mere stranger to her. Esther was confused. Cazenove, of all present, took in the story most clearly in all its bearings. Ashmead said nothing, but busied himself in restoring the girl to consciousness. Finally Almeda opened her eyes and tried to rise. Cazenove lifted her to a sitting posture, and Ashmead held a glass of water to her lips. She made no effort to drink, but presently she succeeded in lifting her arm, taking the glass from his hand and dashing it, contents and all, into his face.

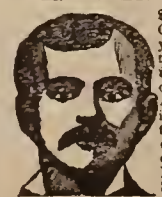
"Viper! Liar! Cheat!" she cried.

Ashmead hastened from the room, mopping the water from his face, while it trickled from his immaculate shirt front. Miss Ackerman and Esther gazed at each other aghast. Cazenove withdrew from supporting Almeda, leaned against the wall and gave way to immoderate laughter.

"Pardon me, ladies," he cried, as they stared at him. "My sense of humor never was a timely or decorous one, and Miss Poore's action gives the best of proof that she is all right and recovered. I see it all. Ashmead has been practicing here some of his usual sentimental *leger-de-main*. The only new feature about it was the *denouement*; that, I fancy, Ashmead has found novel."

Meanwhile Almeda had undergone another change of mood; she was now weeping.

"Esther, take me home with you. Oh, take me home with you for a little while," she pleaded.



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"Certainly I will, Almeda," answered Esther, "but now retire to some chamber, lie down quietly and try to sleep. Miss Ackerman will send some one to stay with you. In the morning you will come home with me."

Almeda did go home with Mr. and Mrs. Cazenove. She was a changed girl after this, more subdued, more awakened, more discerning. She had firmly believed that Ashmead loved her. She told only the simple truth in saying that he had given her every reason to suppose so, and she had no clew to the nature of such a man—who looked upon her only as a good subject to toy with and experiment upon, to discover perchance wherein her nature differed from that of her sisters in higher social state. The disillusion and suffering was terrible to her, despite the exhibition that had made Cazenove laugh that night, and her humiliation was complete. Esther sometimes found her crestfallen condition rather pathetic in contrast with her former lofty airs. Talking with her one day when in this mood, Esther happened to mention Horace Stanwood.

"Horace Stanwood," said Almeda. "I feel meaner than ever when I think of him, Esther. I used to have notions that I was too good for him, that I ought to do better. That was because I didn't know anything. Horace Stanwood is a man. I had to compare him with others to discover that."

"Wouldn't you like to see him?"

"La sakes! I should feel I could not look him in the face after the way I treated him."

"Don't you suppose he would forgive you?"

"I expect he'd forgive me anything. I know Horace Stanwood loves me. You see, I know, 'cause I've discovered what that means."

Esther thought the matter over a little; then she talked it over with her husband. Finally, she sat down one day and wrote a letter to Horace Stanwood. It was a very diplomatic little letter for Esther to write. She told the man all that was necessary for him to learn from any one else than Almeda herself, without entering into circumstantial details that might make Almeda seem less to his eyes or embarrass her should they still remain strangers to each other.

In less than a week from the receipt of that letter, Horace Stanwood was in Boston, sought an interview with Almeda, proposed, and was accepted. Almeda went home to her father's house, and in another month they were married.

* * * * *

The long and sentimental friendship between Miss Ackerman and Dr. Ashmead came to an abrupt close after the night of the party. She subsequently married another. He remains single, and still experiments upon the female heart whenever a picturesque opportunity presents itself.

THE END.

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Our Sunday Afternoon.

"JESUS EVERYWHERE."

THE message of the Lord to-day
Is sounding far o'er all the lands;
Arise and to the fields away;
For bending grain your toil demands.

See! on the sunny slopes and plains
E'en now the whitening harvests wave;
And pagan tongues in heathen fanes
Now cry, Come, O thou Christ, and save.

On every shore the cry is heard,
Come with the gospel's power, we pray;
Come, O voice of the living word,
And speak our darkness into day.

Give speed to faith and wings to love,
Haste ye, where the despairing die;
Rise, O church of the living God,
The day of your triumph is nigh.

The Master hath spoken the word,
And the day of his power shall come;
Let his burning message be heard,
Go, gather the wanderers home.

Arise then, and let us go hence,
Be it the crown of thorns to wear,
His glory be our recompense—
The love of "Jesus everywhere."

—Religious Herald.

THE TELUGU MISSION.

The REMARKABLE work carried on by the American Baptist Missionary Union among the Telugus is still a cause for surprise and gratitude. It is reported that since the beginning of 1889, there have been over one thousand baptisms in the Ongole district, and four hundred and seventy-one in the Vinukonda district. Dr. Clough, of Ongole, reports the baptisms by himself of four hundred and twenty during the month of February, 1889.

He sends the following striking account of a visit at Rivalporum, a village thirty miles from Ongole: When he reached the village, on account of peculiar circumstances, he pitched his tent at a spot where, unknown to himself at the time, a fakir, some twenty-five years before, had prophesied that a teacher from God would at some time pitch his tent, who would bring a message to the people from God. It seems this fakir who made the prophecy ordered the people to keep three big pots of ghee (clarified butter), and give them over to the teachers whom God would send them. So when Dr. Clough pitched his tent on the designated spot, the people brought the pots of ghee and asked him what he was going to do with them. He took them, and stuffing old rags into each of the pots, lighted them, making a grand blaze throughout the night. This attracted the people and they came in crowds, and the golden opportunity was seized for preaching Christ. Hundreds heard the word of salvation in the light of this blaze, before which idols were brought out and broken to pieces. The preaching was continued until dawn, and for some days subsequently. It was a remarkable scene, and it is believed many saving impressions were produced.—Mission Herald.

OH, THAT HE MIGHT RETURN!

Not shrouded in suffering mortality, but with unveiled glory, the glory He had with the Father before the world was. Shall the world never see that radiant form—that unveiled glory? Yes, every eye shall see him. The divine one shall come—is coming. That is fixed by the sure word of promise. On that rock rests our faith. He is coming to ransom his weary and waiting church—to claim his waiting bride. He is coming as a victorious chieftain comes to his courageous but exhausted squadrons, overborne by numbers, disheartened by treachery, as well as by deception and malice. His presence on the field of battle shall reanimate the fainting and the fearful. His trumpet call shall gather the scattered forces and reform the scattered columns; and the long-delayed victory shall crown him, who in righteousness doth judge and make war, and on whose vesture and thigh are written, King of kings, and Lord of lords.

Who can tell what morning the white banner of the coming King may be seen floating in the gray dawn of the eastern sky, bringing in Zion's long-expected day of redemption? Our eyes are yet to see the King in his beauty, walking the earth he came to save.—Rev. E. T. Hiscox.

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SAVING HER BOYS.

I think when a boy has become an habitual loafer he is then ready for something worse, and I was greatly worried to find my boys come slipping in very quietly about the time the stores closed for the night, so I just resolved to try and make a more pleasant place to spend the evenings than the aforesaid stores.

Our best room had hitherto been kept sacred to the use of visitors and for Sabbath; but after thinking the matter over very seriously I started a fire, arranged everything as nicely as though I were looking for company, and then let the boys have it. So far the plan has been a great success, for, although I never said a word to them about it, they took right up with it and now spend their evenings at home reading and playing (for they are all three musical), and besides being better for the boys, it is better for us.

Now, sisters, just between ourselves, of course they'll spoil the carpet, and it's a real pretty carpet, too, and I have been so careful of it. But I mean, through God's help, to have my boys all grow up to become good men, and if it's going to take a pretty room and pretty carpets to help do it, why, I am very glad I have them, that's all.

THE CHINESE IN CALIFORNIA.

Notwithstanding the Chinese exclusion act, the Chinese population of California at this time numbers 71,681, showing that there has been a very slight decrease within the past ten years. Many of the Chinese residents of the state have returned to their native country within these years, and many have left California for other states. There has been no increase of the Chinese population through the birth of children, as but very few Chinese women have ever been brought to this country.

There need be no doubt that Chinamen reach California from British Columbia, to which they take passage from Hong Kong. The federal government is trying to put a stop to this migration, which goes on in violation of the exclusion act, and it is reported that a letter on the subject was recently sent to the British Canadian Customs Department, which replied that it had no power to interfere with the movements of Chinamen who arrive in Canada and pay the poll tax.

It is only by the vigorous enforcement of the exclusion act along the whole line of the Canadian border that the influx of Chinamen to this country can be prevented.

GOD'S ACRE.

The old Teutonic and Saxon term, "God's Acre," as applied to the last resting place of the human body, Longfellow made the theme of one of his most touching and beautiful poems; it is an eminently suggestive term. The acre, or field of God, contains the seed hidden in the ground for awhile, to ripen into a glorious harvest; and just as we write the labels in the springtime for seed we put in the ground, that we may remember what beautiful flower is to spring from the little gray atom, so we put a stone at the head of the grave of our dead. The "cemetery" also signifies merely the place where one may lie, slumbering for awhile, till the dawn shall come and the trumpet sound.—St. Louis Republic.

TACT.

Some men have tact in different degrees, while others are wanting in it altogether. It is the outcome of intellectual and of temperamental qualifications, and implies the possession of clear perceptions, quick imagination and delicate sensibilities. It is these that give the tactful person his subtle intuition of another's mental processes and moods of feeling, and in the same moment show exactly the right method of action.

Our Household.

OVER AND OVER AGAIN.

Over and over again

My duties wait for me,
They ever come in monotonous round—
Breakfast and dinner and tea,
Smoothing the snow-white clothes,
Sweeping and dusting with care.
There is ever some task in my little home
To brighten it everywhere.
What may I claim for my duty's fee?
Are these endless rounds of tasks to be
Naught but a dull monotony,
Over and over again?

Over and over again

The sun sinks low in the West,
And always over and over again.
The birds come back to the nest.
The robin sings to his loving mate,
Close, close to my cottage door,
The same glad song I have heard him sing
For many a day before.
What does the robin say to me?
If the heart is tuned to love's glad key,
No task can be dull monotony,
Though over and over again.
—Ada Simpson Sherwood, in *Good Housekeeping*.

HOME TOPICS.



RHUBARB AND BERRY PIES.—In making rhubarb, cherry or berry pies, put nearly all the sugar needed for the pie in the bottom of the crust before putting in the fruit. Mix a tablespoon-

ful of flour with the sugar; then put in the fruit, sprinkle a little more sugar over the top, dust a little flour over, and strew bits of butter over all. Moisten the edge of the under crust before putting on the top crust and press the edges firmly together. Pies made in this way will not boil over when cooking, and will be found rich and juicy when done.

When I first began making rhubarb pies this spring, one day I thought I had hardly enough rhubarb for the two pies I wanted to make. I had a few cranberries, and put about half a teacupful of them in each pie. The result was pronounced an improvement on either rhubarb or cranberry pie.

When we grow a little tired of rhubarb pies, I sometimes make them with one crust, like a lemon pie. To a pint of stewed rhubarb add sugar enough to sweeten to taste, a tablespoonful of flour, a tablespoonful of butter, the yolks of two eggs, well beaten, and a teaspoonful of lemon extract. Bake this in one crust. While the pie is baking, beat the whites



DRESS.

of two eggs to a stiff froth, add a tablespoonful of powdered sugar, and as soon as the pie is done, spread this over the top and return it to the oven for a minute or two, or until it is a very light yellow.

STRAWBERRY SHORT-CAKE.—As strawberry short-cakes will soon be in order, I

will give my recipe: Have the berries picked over, sugar them and mash them somewhat with a silver spoon. Make a dough as for baking-powder or soda biscuit, only use a little more shortening; roll a half inch thick and bake in two cakes; as soon as done split each cake, butter and spread it with berries, place another layer on this, crust side down; proceed in the same way until the last, which must be put crust side up, and sprinkle with powdered sugar over the top. Raspberry or blackberry short-cake is made in the same way, and is relished equally as well in our family.

FEATHER BEDS.—Many middle-aged and old people still think that there is no bed quite so good as one of feathers. If they will try spreading a square of table oil-cloth over the feather bed before putting on the sheets, it will make a bed that is cool the hottest night, and is soft and yielding besides. In the winter, use the oil-cloth in the same way, but put a light blanket over it and then the sheets and other bedding. This keeps the feather bed from absorbing the poisonous exhalations from the body.

HOME MAKING.—Often young housekeepers are discouraged when they see the orderly households and well cooked meals of some experienced friend, and despair of attaining a like degree of excellence in the household art. But do not be discouraged. This result was not reached in a day. It has often been preceded by just such trials and mistakes as you are experiencing now. You see only the result. The long years of patient labor, of triumph and defeat, of success and failure, are hidden in the past. But of this be assured, the geni of the household reveal their mysteries only to those who exercise thought and bear patiently with their failures, in the meantime using every means to increase their knowledge. Do not understand me to say that to be a good housekeeper means to make everything else subservient to this one idea. Far from it. "Order is heaven's first law," and "Cleanliness is next to Godliness," are oft-repeated maxims. Truly, both should be maintained so far as is consistent with other duties; but to sacrifice one's pleasure, good nature and health for this object, seems to me foolish in the extreme. Children need something more than clean dresses, and a husband something more than a spotless kitchen floor and meals ready with mechanical regularity. The wife and mother who gives all her attention to these will have no time to be companion, friend and counselor. She will make her life as wife and mother a miserable failure, and her home, though it will be one of scrupulous neatness, will not be one of which the children will carry loving memories through all their lives.

MAIDA McL.

BABY'S WARDROBE.

LOUISE LONG CHRISTIE.

I.

Some subjects get worn out the more they are spoken of, but baby will always be new. While the world lasts there will be babies, and as long as babies come, they must have clothes. To the women who, as little girls, played with dolls, and in that way learned to sew, the preparation of a baby's wardrobe is not so difficult a matter. But it would surprise many of my readers to know how many women there are who have not the slightest idea of the necessary articles required for the little child that so soon comes to them.

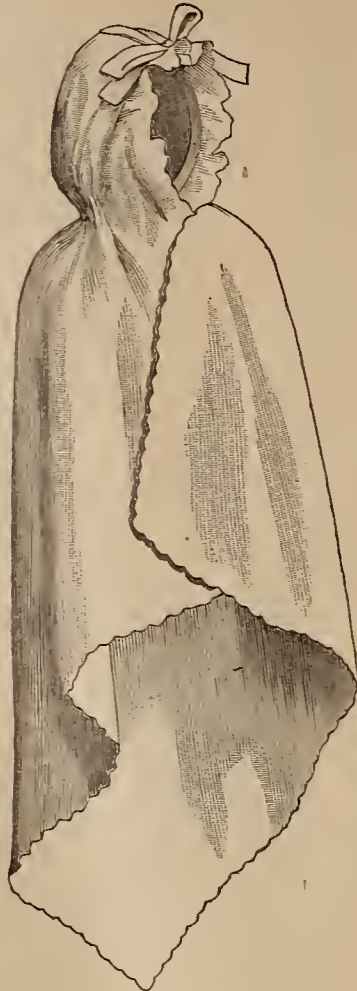
In the matter of clothing there has been a great reform in the ways of making clothes from the time ten years ago, when I first wrote on this subject. Since then the pens of women all over the country have moved swift and fast in the discussion of this always new subject. Fewer articles are now necessary if one stops at the real necessities; but when one can be lavish, the wardrobe can be very elaborate.

I do not believe those who want an elaborate wardrobe will be interested in my papers, for I mean to make them entirely for those whose means are moderate and who must know what they must have. If it is a case of "can have," all you have to do is to go to the store and select.

The bare necessities can be contained in the following list: Six dresses, six slips, three flannel skirts, two foot-blankets, six pairs of socks, five dozen diapers, a

pair of small blankets, a small pillow, two double wrappers, a cap and cloak, a shawl cloak and a furnished baby-basket.

The wardrobes of the most taste display garments made in the most simple styles. No heavy embroideries of any kind are used. The bottoms of dresses and skirts are alike finished in hemstitch or dainty



SHAWL.

lace. As the goods come already hemstitched, at very little more than the plain goods, this lessens the work. All dresses are made either the Mother Hubbard style (the yoke being as dainty as possible, but the skirt perfectly plain; full, bishop sleeves, gathered into a tiny band at the wrist), or the very short, straight waist, with skirt and sleeves the same as the first.

Much more attention is given to the material than piling up crumpling upon the clothes. Very fine, cross-barred muslin of the widest width, as near a yard as possible, nainsook or India linen, are the best materials, as, since they must be laundered so frequently, it is well to have good material. The slips, which will be used for day and night both for the first two months, can be made in one piece, of Lonsdale cambric of fine quality.

Of the flannels, one can be of very extra quality, to wear on dress occasions, which will cost from one dollar to one dollar and a half a yard already embroidered. Two of plainer can be used for constant wear, day and night.

As few people know how to wash flannels so they will last any time, it is best to have few and renew them when they have become fulled and boardy. The good quality of flannel (seventy-five and eighty cents a yard) will not do this; but some will be tempted to buy the forty-cent goods, thinking it economy. This is narrow, and soon washes badly.

The foot-blankets can be made of a square of flannel, one point cut off and gathered into the band, and the other points folded over the feet. For the ordinary flannels, briar stitching, in silk, is quite sufficient decoration. For the foot-blankets, pinking does nicely.

WHEN SPRING FLOWERS BLOOM.

BY KATE KAUFFMAN.

No. 2.

Lilacs are loved by old and young. Before you try to paint them, reflect; they are really quite difficult. But you may as well try, even if you don't succeed very well the first time. If you wish a basketful—and few young artists are content with any less—arrange masses of white and masses of purple; do not scatter and alternate the colors so as to produce a spotted effect. Have a side light fall on your flowers, perhaps have them tumbled out from the basket, which is turned a little so as not to let the light enter its depth. This will produce a very dark background and by its contrast heighten the effect of the delicate flowers; and you know "effect" is the thing to strive after.

When you begin painting, regard each thyrse of flowers as a whole. Take a large bristle brush, and for the purple bunches use a mixture made of madder lake, cobalt blue and white. On the side toward the light this purple will be a delicate tint, on the shady side it will be much darker, and those purple bunches farthest away from you will appear a dark, indistinct hue. The white clusters must be treated in the same way; a delicate tinge of yellowish or greenish white on one side, a grayish green on the side farthest from the light. The green leaves and the background and the basket, if there be one, may be broadly laid in and then, if it were my picture, I should let it dry. The next time I should repeat the same process on the flowers, only that where the individual blossoms show I should make them. One stroke of the brush is enough for each of the four segments of the blossoms. Those turned sidewise require a different treatment, and also the buds which are generally at the end of each cluster. Only the most conspicuous blossoms require the little yellow center to show. Look at your natural flowers with your eyes half closed. This will bring out the parts to which you must give prominence in your picture and will throw into obscurity those parts which must be painted with indistinctness.

Snowballs bloom in May and, although they have no fragrance, there is something in their greenish whiteness which is very charming. They make a beautiful picture painted in water color on gray paper. Mount your paper on pasteboard. To do this, make a thick paste of flour and cold water, then add a little hot water and let it boil a moment. Keep it thick. Soak your paper in water until quite wet. Put the paste evenly on the pasteboard and then put on the paper. Smooth it evenly with a clean muslin rag. The paper having been wet it will shrink in drying so as to be perfectly smooth. If you paint in water colors on paper which is unmounted, it shrinks only where the paint is applied and makes wrinkles. Each snowball must be treated first as a ball, and if you don't know how to shade a ball so as to produce the appear-



SHAWL CLOAK.

ance of roundness, you will be vexed from the first in painting snowballs. Let half of each ball be in light and half in shadow. There will be some of the individual blossoms show, just as in the case of the lilacs. To make these blossoms overlap each other, to be distinct and at the same time indistinct, is a nice bit of art. The leaves of the snowball-bush are a picturesque shape and admit of every possible shade of green. If you paint this flower in oil, let your background be something belonging to the family of greens, but

avoid blue; at least, do not let the blue show, it is like many other useful things—better out of sight; but warm yellows and delicate siennas will produce a pleasing variety.

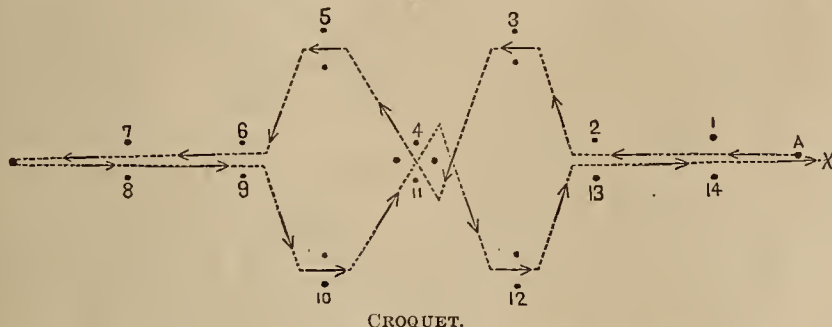
Wistaria is another flower which offers to the artist the beauty, but at the same time the difficulty of clusters. Its branches are graceful, the delicate leaves at the end being exquisite in form and color. If you attempt it, group your flowers and foliage rather thickly at the top and let light branches wander downwards. If possible, take your easel out where the vine grows and paint it just as nature has arranged it.

The different varieties of the narcissus are dear to all lovers of beauty. Take the yellow jonquils with the ruffle-edged funnel in the center and the beautiful, flaring petals surrounding it. Study such a blossom in every position; it is beautiful every way. The white narcissus with yellow center edged with orange is another choice study. And now to those persons who have neither brush nor paint-box, and who sometimes feel a wish to try a little art study, let me say that a sketch with a lead pencil is often more

other strike; if through first and second, he has two strikes. The dotted lines show the course to pursue, and the arrows the direction. The player who drives his ball through all the wickets first, wins the game. Each one plays in turn, one strike apiece, unless passing through a wicket gives one an extra or two. Hitting another ball gives an extra strike. The same ball cannot be hit twice in succession, without going through a wicket between the hits.

There are a good many other rules that expert croquet players are governed by, but think these few simple ones will enable the little ones to have quite a game of their own, and afford considerable amusement. When you get tired of playing, all the spools and marbles and mallets can be packed away in a small box and will be ready for some other time.

I wonder how many mothers save their empty spools for the babies. I believe our children took more comfort and played longer with that box of spools than any other plaything they ever had; and there was quite an assortment, for they were the only grandchildren on both sides of the family. Some way those



beautiful than one made with a brush. Pictures of flowers made with pen and ink are in the highest degree refined. If you have seen those books of Irene Jerome's, you remember that her flowers are all colorless and nothing is more exquisite than her violets. There is no reason why you should not try to draw violets. Scatter a few on a sheet of white paper and reproduce them on another sheet, using an ordinary lead pencil, nicely sharpened.

PARODY.

How dear to my heart are the clothes of my childhood—
The aprons and blouses and slips that I wore—
By the rails of the fences and thorns of the wildwood
Adorned with fringes and tatters galore,
Those old-fashioned garments, compiled by my mother
For usefulness rather than beauty or style,
Are fondly recalled by the sight of another—
The old Mother Hubbard that idiots revile,
Oh, the old Mother Hubbard, the dear Mother Hubbard,
The loose Mother Hubbard—
Well, now, I should smile!

This three-story bustle—I cannot regard it
With favor this sweltering morning in June
(Or July or August—to me as a bard it
Don't matter what time, so I stick to the tune),
And so, by your leave, I will even discard it
And with it the corset that fits me too soon.
Dame Grundy, Adieu! Mother Hubbard embrace me;
Though dudedom forsake us and kick like a steer,
I love you, I love you, although you disgrace me,
Come rest on this bosom my own stricken dear.
Oh, you good Mother Hubbard, you sweet Mother Hubbard,
You nice Mother Hubbard,
So far, yet so near.

—J. C. Dav's.

CROQUET.

Did the children ever think they could play croquet in the house, without the expense of buying a parlor croquet set? Please, mother, do not say: "it is such a muss," for it will keep the kids so happy on stormy days. Just give them twenty empty spools, a marble apiece, of different colors, and a little mallet. Our boys used a small tack hammer for a mallet, but they would be better made out of wood. A small, straight stick can be fastened into the side of a spool and it will make a good mallet.

Use the table if mother will spare it; otherwise the floor will answer. For wickets, set two spools side by side and about two or three inches apart, according to the size of your ground. The stake at the end is one spool. The marbles are for balls. Perhaps all of the little readers are not familiar with the old game of croquet, will send a diagram of the ground and a few simple rules.

A player strikes the ball at A, and it goes through the first wicket; he has an-

other strike; if through first and second, he has two strikes. The dotted lines show the course to pursue, and the arrows the direction. The player who drives his ball through all the wickets first, wins the game. Each one plays in turn, one strike apiece, unless passing through a wicket gives one an extra or two. Hitting another ball gives an extra strike. The same ball cannot be hit twice in succession, without going through a wicket between the hits.

HOME COOKERY.

LEMON CRACKERS.—

2½ cupfuls of sugar,
2 eggs,
1 pint of sweet milk,
1 cupful of lard,
2 tablespoonfuls of baking ammonia dissolved in the milk,
2 tablespoonfuls of essence of lemon.

Make a dough very stiff and roll thin. Be careful not to bake too brown. Stick with a fork.

LEMON PIE.—For four pies, take four tablespoonfuls of corn-starch dissolved in a little cold water, add three pints of boiling water, the juice of two lemons and the grated rind of one, three well-beaten eggs, one cupful of white sugar. Bake with a top crust. V. A. J.

HOME-MADE HONEY.—To one and one half pints of alcohol add three drops of pure rose oil. Bottle and keep ready for use. Take four



pounds of white sugar, two cupfuls of brown sugar to give it color, add to it one and one half pints of water. Boil five minutes, then add one tablespoonful of alcohol and rose oil, one tablespoonful of grated alum. Boil five minutes longer and set off to cool. This makes a palatable spread. V. A. J.

MINT SAUCE TO USE ON LAMB.—Select young sprigs of spearmint (not peppermint), cut fine with a sharp knife, put in a small tin and pour hot vinegar, slightly sweetened, over it. When cool, pour into a glass to serve upon the table. L. L. C.

JELLY.—The time to put up fruit so it will keep well, is in the height of the season. Care must be taken also that it is fresh and not held over till the next market day. Stale fruit will invariably ferment, and no amount of sugar will keep it. With sugar of the best quality now at five and one half cents a pound, no excuse can be offered for using brown or off shades of sugar. To insure good jelly, it must be made in small quantities. A large-bottomed, pressed tin pan is very nice, and should be kept for that purpose alone. Heat

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ing the sugar saves the juice from falling below the boiling point; if, after it has been added in currant jelly, the pan can be pulled back on the stove, by the time the sugar is dissolved it will be ready to pour into glasses. Jelly should never be stirred; tip the pan from side to side, but never use a spoon. After it is well skimmed, put the beaten white of an egg on top of it to gather what remains and clear it. The glasses should be heated before pouring in the jelly, as this keeps on cooking it. Jelly will keep by covering it, after it is set, thickly with granulated sugar, or pour melted paraffine over it, and tie up with tissue paper. No liquor of any kind is necessary about it; it will keep just as well without it.

CURRENT JELLY.—Wash and strip the currants from the stems and put them in a preserving kettle; mash them as they get hot and let them boil half an hour; then turn them into a coarse hair sieve or jelly-bag and let them drip. When through dripping, without squeezing any, measure and pour into the kettle to cook. After it has boiled about ten minutes put in the heated sugar, allowing a pound of sugar to a pint of jelly, and the jelly will set as soon as the sugar is dissolved—about three quarters of an hour.

RHUBARB AND APPLE JELLY.—Cut up your rhubarb and wash it; put on the fire without any water at all. Take good, sour apples and pare and quarter, and cook in very little water. Strain the juice from both and put them on the stove to cook for fifteen minutes. Then add the heated sugar, three fourths as much sugar as juice. Boil hard for twenty minutes; turn into glasses and set in the sun, if possible, for half a day. Seal the next day.

PRESERVED STRAWBERRIES.—Remove the hulls from your berries and put in a colander, a couple of quarts only at a time. Pour water over to cleanse them. Have on the stove a pan of sirup made of two pounds of white sugar and half a cupful of water, drop the berries into it; allow them to cook rapidly for twenty minutes; remove all the scum that rises, but do not stir the fruit; pour into tumblers, and when you are all done cook your sirup and juice to a jelly and fill up your glasses. Let stand till next day and tie up with thin paper, over which put a cloth. Keep in a dry place.

SPICED CHERRIES.—

9 pounds of fruit,
4 pounds of sugar,
1 pint of cider vinegar,
½ ounce of cinnamon bark,
½ ounce of whole cloves.

Let the sirup come to a boil before putting in the fruit; cook the fruit until the skins break; then take out the fruit and boil the sirup down until thick; pour over fruit hot.

Fruit put up early in the season should be carefully looked over during the very warm weather. Keep jellies in a warm place, canned fruit cool. CHRISTIE IRVING.

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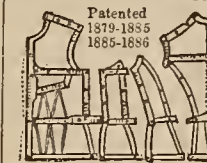
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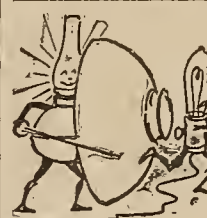
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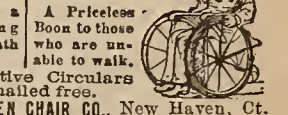
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Queries.

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Pamphlet on Nitrate of Soda.—C. H. C., Salein, Oregon, desires to get a copy of Harris' pamphlet, or other information on its use. Write to Joseph Harris Seed Co., Moreton Farm, Monroe Co., N. Y.

Remedy for Tomato Worm.—Mrs. J. B., Parkerville, Kan., asks how to prevent the ravages of the tomato worm. I know but a single practical remedy, and that is a simple and effective one; namely, hand-picking.

Bordeaux Mixture.—H. W. H., Franklin, Mass. Slack four pounds of quick lime in twenty gallons of water; then dissolve six pounds of sulphate of copper (blue stone) in two gallons of water and add it to the lime water. Stir thoroughly and apply with a spraying machine.

Book-keeping on the Farm—Manual and Record.—G. W. S., Willet, N. Y., and others. In reply to numerous inquiries for the work on farm book-keeping mentioned in a recent farm article, we would say that the Manual and Record is published by W. M. Farrar Co., Chicago, Ill. Price \$4.

Roots for Feeding Cows.—W. L. C., Lincoln, Ill., asks for information on growing roots for stock. REPLY BY JOSEPH.—I prefer the Yellow Globe mangel to almost any other kind of roots, but sugar beets, the White Belgium and other carrots, and even parsnips, are also excellent. Prepare the ground as you would for corn, perhaps even more carefully, and being more liberal with good old manure. Drill in seed, at the rate of four pounds to the acre, in rows three feet apart. Cultivate and hoe, and weed and thin as common sense would teach, and you can raise very large yields.

Time to Cut Timothy—Millet or Wild Grass Pasture for Horses.—T. S., North Topeka, Kan., asks: "(1) When should timothy be cut so that the dust will not hurt horses in feeding? (2) Which is better for work horses, to feed them millet hay or let them run on the prairie grass at night in the summer time?"

REPLY:—(1) Timothy should be cut for hay just as soon after the bloom drops as possible. Cured properly without rain or dew, it will not be dusty. (2) Feed good grain rations and let them run on prairie grass.

Book on Canning Wanted.—I. R. M., Carrollton, Ky., writes: "Can you cite us to any book or pamphlet that gives the details of canning tomatoes, corn, beans, peaches, etc., as practiced by the large canneries over the country?"

REPLY:—We know of no books published on the subject, but you can probably get all the information you need from the manufacturers of canning machinery. Write to Merrell & Soule, Syracuse, N. Y. The descriptive circulars of the apparatus will give you the best methods of canning.

To Secure Straight Honeycombs.—E. M. C., Persia, Iowa, writes: "Please explain how to prevent bees from building honey the wrong way in the sections. I have some bees that built honey crossways and fastened the sections all together. What can I do to make them build it right?"

REPLY:—Put a strip of comb foundation in the middle of each section for a guide. Have the hives stand perfectly level from side to side. They may tip a little forward if the combs of the brood nest and surplus boxes both run from front to rear. If you keep two colonies you need a book on bee culture. This office can furnish you a good one, or you can get one from A. I. Root, Medina, Ohio.

Cabbage on Clay Soil.—S. F. D., Phillipsville (no state given), writes: "I use what is said to be a complete fertilizer, yet I fail to get the cabbage. My soil is clay loam underlaid with hard pan."

REPLY BY JOSEPH:—If the "complete" fertilizer is genuine high-grade, applied liberally enough, yet fails to bring the cabbage, the fault is probably in the soil. Perhaps it needs more organic matter to loosen it and help the fertilizer to take proper effect. In such case grow clover and plow it in, or let it rot on the ground, then follow with cabbage, or apply manure or stable manure. Perhaps the drainage is not perfect. See to it that it is, and if possible use the sub-soil plow after the ordinary plow.

Potato Queries.—K. F., Dawson, Neb., writes: "Is it better to plant the whole potato or to cut them? If cut to one or two eyes to the piece, will they grow better by sun-drying several days after cutting and before planting?"

REPLY BY JOSEPH:—The whole tuber always gives the heaviest yield, but sometimes this increase is mostly in small potatoes. My favorite method is to plant whole, medium-sized tubers, or half of large ones. Should there be an excess of stalk, I pull up the weakest. When seed potatoes are as high-priced and scarce as they are this year, I cut closer, but rarely make more than four pieces out of any potato. The seed pieces should not be dried before planting. They should be plump and fresh; and by far the best way is to plant immediately after cutting the seed.

Kerosene on Seed-Corn.—D. F. D., Broadlands, Ill., in reply to query, writes that kerosene on seed-corn is a failure in practice, however well it sounds in theory.

D. C. S., Sioux Falls, South Dakota, writes: "I see in your paper of May 1st you think it very doubtful about kerosene oil protecting seed corn. It is not claimed that it will protect from cut worms, but only from gophers, ground squirrels, etc. Several Rock county, Minnesota, farmers tried the experiment last year with success. The seed was thoroughly wet without injury and the gopher did not touch it, while adjoining fields were badly damaged. But a much better way is to hang the seed-corn up in baskets in the smoke-house just before planting and smoke for a few hours. This does not injure the seed and nothing will touch the corn before sprouting. It is even claimed that cut worms do not like the flavor of the sprout from smoked seed, but I do not know, as cut worms have never injured my corn."

H. J. M., Utopia, Texas, writes: "In last issue of FARM AND FIRESIDE there is a query from W. H. S., Augusta, Ill., asking for information in regard to putting kerosene oil on seed-corn. It won't do. If he tries it and has no better success than I, he will, no doubt, arrive at the same conclusion. Now, for the benefit of your subscribers I send you the mode we take to protect our seed-corn from insects,

moles, etc. We cover our seed with coal tar; stir it until every grain is covered, then stir in lime or ashes [Land-plaster is best.—Ed.] to dry it so that it will not stick together. If he will try this he will find that bugs, moles and insects will not bother, and the birds of the air will leave it strictly alone."

W. O. A., Yates, Oklahoma, writes: "In reply to W. H. S., Augusta, Ill., about the kerosene on seed-corn, I will say if the corn is thoroughly wet with oil it does no harm, neither does it do any amount of good in the way of protecting the seed from insects. But if the corn is smoked black, caution being used in hanging the corn high from the fire, after the corn is three or four inches high, smoke can be tasted in the leaves. No kind of insect will molest smoked seed-corn. A good way to smoke it is to smoke it when you do meat."

To Get Rid of Weeds.—G. W. T., Loretto, Va., writes: "I would like to hear from some good farmer who has had experience in getting rid of sheep-sorrel. The field where the pest is, for many years was timbered and was covered with water all winter. I cleared it out, drained it, and it produced well for two years. It then went back and the sorrel or sour grass is taking it. The advice of a reader will be highly appreciated in regard to getting rid of it. What will make it produce vegetation again? The soil is apparently as rich as can be, but has no grit in it and sticks to plow and hoe."

REPLY:—Let some reader who has had experience in getting rid of sorrel please answer. As to getting rid of weeds in general it is necessary, first, to destroy the plants and seeds now in the soil, and then prevent the further introduction of weed seeds. Careful and thorough cultivation of the land in hoed crops, with rotation in clover, is the best advice that we can give. Common red clover, aided by land-plaster or some other good chemical fertilizer, is a most excellent weed-exterminator. A good growth will smother and kill out many of our worst weeds. Keep your land well drained. Give a small portion of it a liberal top-dressing of fresh, air-slacked lime, and find out if it benefits it. Apply it at the rate of fifty to one hundred bushels per acre. This will not destroy the weeds but sweeten the soil and help make it produce a crop that will keep ahead of the weeds.

VETERINARY.

Conducted by Dr. H. J. Detmers, Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Luxation of the Patella.—F. M. B., Fruit Hill, Ill. Your horse suffers from a chronic luxation of the patella.

Heaves.—O. R. G., Summerfield, Kan., writes: "We have a horse that has the heaves, and I would like to know what will cure him."

ANSWER:—Nothing. For further information please consult the answers given to numerous similar inquiries.

Wants a Remedy.—C. B., Chebalis, Wash., writes: "What is best for cleaning cows after they have calved?"

ANSWER:—Breed only healthy cows, keep them well, give suitable food in sufficient quantities and allow all cows with calf sufficient voluntary exercise, and you very seldom will have any trouble.

A Lateral Opening in the Teat of a Cow.—J. H. M., Lowell, W. Va., writes: "I have a cow that has a teat which has an apparently natural orifice about one half way from udder to point of teat, from which the milk flows more freely than at the end of teat."

ANSWER:—Consult FARM AND FIRESIDE of May 15th.

Stock Book.—F. C. D., Norris, Mo., writes: "Will you please give me information where I could get a complete stock book treating on diseases in all their forms and their remedies? If you know of more than one, which would suit me best?"

ANSWER:—I cannot give you the desired information, because I do not know of any such book that I can recommend.

Lice on Cattle.—A. H. D., Lice on cattle will be killed by a good wash with a tobacco decoction, also by several other applications. The main point is to apply thoroughly whatever is used, and to clean the premises so that the animals may not become reinfected after they have been washed. Since it is spring, it will be best to turn your cattle out to pasture immediately after they have been washed.

So-called Scratches.—J. C. M., Eastman, Ga., writes: "I have a fine horse that has what is called the scratches all over his body, from lying in a nasty lot. Please tell me what to do for him."

ANSWER:—Good, thorough and frequent grooming constitutes the remedy. If there are any places especially sore and inflamed, a mixture of liquid subacetate of lead and olive oil (1 to 3) may be applied to them twice a day.

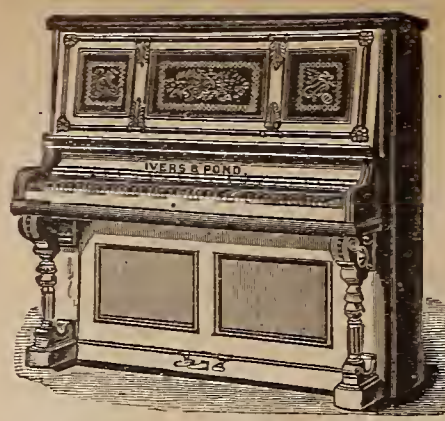
A Defective Teat.—J. M. L., Mounds, Ill., writes: "I have a young heifer with a calf. She seems to have plenty of milk, but it will not come down out of the udder into the teat. Three teats are all right; just one affected."

ANSWER:—If the milk does not come down into the teat, you cannot do anything but leave that teat alone. Your cow will give just as much milk from three teats as she would have given if all four teats were normally developed.

Chronic Founder.—L. W. J., Ashley, Utah. Chronic founder, or laminitis, is incurable, because the existing morbid changes and the degeneration of the hoof, inside and outside, are permanent. If the frog is sound and strong, you can considerably ease the horse by proper shoeing, having the same shod with suitable and well-fitting bar-shoes, which, of course, must be very concave on the upper surface, inside the nail-holes, so as not to press upon the tender sole of the foot.

Bad Effect of Ringing Pigs.—J. L. M., Cannon's Mill, O., writes: "I have ten shoats about five months old. I had them rung and turned them on grass. Their ears got black, dried and looked as if they were frozen, but were not. They walk for a while all right, then will drop the back and shoulders. Their snouts turned black and scaled off. Have been feeding corn and swill."

ANSWER:—Your shoats, probably, are affected with swine plague. At any rate, some septic germs have entered the wounds caused by the ringing, and have produced the morbid changes you complain of. Bathe the affected parts three times a day with a five-per-cent solution of carbolic acid in water.



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Our Miscellany.

DANGER.

"Where are you going my pretty maid?"
 "Out to the Zoo, kind sir," she said.
 "May I go with you, my pretty maid?"
 "They might detain you, sir," she said.

—New York Sun.

GERMANY is contemplating restrictive immigration legislation.

REAL estate nine miles from the center of Chicago sells for \$4,000 an acre.

TENNESSEE has passed a law that school directors must be able to read and write.

THE man who has a kind word for everybody does more good than a surly one could do with money.

THERE wouldn't be so many tired people in the world if men would stop climbing hills before they get to them.

THE difficulty in this cold world is that too many fellows want to stand with their backs to the fire.—Bradford Record.

WHEN a dressmaker doesn't give her customers fits, the customers give the dressmaker fits.—Louisville Journal.

HELP YOURSELF TO GET RID of that Cough or Cold, or any Asthmatic or Throat Trouble, by using Dr. D. Jayne's Expectorant.

JOAQUIN MILLER has abandoned literature for arboriculture, and has already planted more than twenty thousand trees on his estate at Oakland, California.

THE man who has the courage to stand up and face a lie when it is armed to the teeth, is a man that angels never tire of looking at.—Indianapolis Ram's Horn.

PASSENGERS and freight are carried for one third less on American railroads than on those of England, although American wages are double those of the mother country.

A CHINESE capitalist, under the concession of lands free of rent, is making arrangements to colonize lands on the Isthmus of Tehantepec with Chinese agriculturists.

THE number of locomotives in the United States on June 20, 1890, is stated by the interstate commissioners' statistician at 29,036, and the number of cars of all kinds at 1,097,571.

THERE were \$900,000,000 spent in this country in 1890 for spirituous and malt liquors, \$122,500,000 for coffee and \$30,000,000 for tea. The extravagance of the American people in the use of tea and coffee is astounding.

"YES, he died a natural death. He just went from one sleep into another till he fell into the last sleep."

"What was deceased's occupation?"

"He was a policeman."—Epoch.

CALLER—"And this is the new baby?"

Fond Mother—"Isn't he splendid?"

Caller—"Yes, indeed."

Fond Mother—"And so bright. See how intelligently he breathes."—Chicago News.

SHORT crops in France will compel that country to import a great deal of wheat this year, and probably to lower the duties on breadstuffs. American farmers will reap the benefit of a more active demand for their products.

PRIEST—"Well, Dennis, you're married I hear. I'm very glad of it. How do you and your wife get along together?"

Dennis—"Well, yer riverence, Oi t'ink we get along besht together whin we're apart."—Boston Courier.

SMALL articles made of malleable iron are now finished and polished bright by being placed in revolving drums with curriers' shavings, from which they emerge with all of the rough edges smoothed and the surface highly polished.

WATTS—"I saw one man made happy yesterday."

Potts—"Who?"

Watts—"Fellow with a new twelve-dollar suit on. Small boy called him a dude."—Indianapolis Journal.

THE Turkish sultan's kitchen costs the empire \$200,000 annually. The building extends 150 feet on every side. The dishes are sealed in the kitchen by no less a person than Osman Pasha, the hero of Plevna, and are unsealed in the sultan's presence.

BISHOP WILLIAMS informs a matrimonial candidate of Connecticut that the laws of the Episcopal church will not allow him to omit the word "obey" from the marriage service. The church, however, has no law to compel the bride to keep her word after she has given it.

A RECENT census of the Sandwich Islands makes the population to be 90,046, an increase of 9,468 since 1884. For the first time in the history of the kingdom the native Hawaiians, including all of either pure or mixed blood, are an absolute minority of the whole population.—Boston Journal.

THE extension of the use of the typewriter is shown by the fact that in one single building in New York City there are one hundred typewriter operators at work from nine o'clock in the morning till five in the afternoon. In the office of one insurance company there are seventy-five young women employed as typewriters, operators and clerks.

FOR A DISORDERED LIVER TRY BEECHAM'S PILLS.

"CONDUCTOR," murmured the adrifted passenger, "what's the matter in the next Pullman car. Are they having a fight in there?"

"Worse than that," replied the conductor, "one of the ladies is trying to tie her husband's necktie for him."—Clothier and Furnisher.

THE capitol dome at Washington is the only considerable dome of iron in the world. It is a vast hollow sphere weighing 8,000,000 pounds. How much is that? More than 4,000 tons, or almost the weight of 70,000 full-grown persons, or about equal to 1,000 laden coal cars of four tons each, which, if strung out one behind the other, would occupy a mile and a half of track. On the very top of the dome the allegorical figure, "America," weighing 13,985 pounds, lifts its proud head high in air. The pressure of this dome and figure upon the piers and pillars is 14,477 pounds to the square foot. It would, however, require a pressure of 755,286 pounds to the square foot to crush the supports of the dome. The cost of this immense dome was a little short of \$1,000,000.

THE UNITED STATES LEADS THE WORLD IN THE MANUFACTURE OF IRON.

General Manager Swank, of the American Iron and Steel Association, has just issued his annual review of the trade, showing that in 1890 the United States stepped to the front of all countries of the world in the production of iron and steel. The American production of iron exceeded that of Great Britain for the first time. The production of pig iron was 9,202,703 gross tons, the greatest quantity ever produced by us, and about 1,200,000 tons more than was made in Great Britain. Of Bessemer steel ingots, 3,688,871 tons were produced, or nearly 2,000,000 tons more than Great Britain produced, and of Bessemer steel rails we produced 1,867,837 tons against about 1,000,000 tons made in Britain. In the manufacture of open hearth steel, which is used for ship-building, we are still far behind Great Britain, but this is the only important product in which we are second.

Our imports of iron and steel are valued at \$44,540,054, over half of which was in tin plates, which Mr. Swank hopes will hereafter be made in this country, thanks to the McKinley tariff. Our iron and steel exports are valued at \$27,000,134. Prices last year compared very favorably with those of previous years and were higher than in 1889 or 1888. Pig iron brought \$18.40 against \$17.75 the previous year; steel rails sold at \$31.75 against \$29.25, and bar iron at 2.05 cents against 1.94 cents. The present year, however, opens rather unfavorably as to production and prices compared with 1890.

AN ECONOMICAL STOVE.

Young husband—"Well, my dear, did you succeed in finding a stove to suit you?"

Young wife—"Indeed, I did. Such good luck, too. I've got a stove that will never cost us a cent for coal. The dealer said it was a self-feeder."—The Wasp.

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A GIRL'S COMPOSITION ON BOYS.

Boys is men that have not got as big as their papas, and girls is young women that will be young ladies by-and-by. Man was made before woman. When God looked at Adam, he said to himself: "Well, I guess I can do better than that if I try again," and then he made Eve. God liked Eve so much better than he did Adam that there has been more women than men in the world ever since. Boys are a trouble. They are very wearing on everything but soap. If I could have my way, half the boys in the world would be little girls and the other half dolls. My papa is so nice to me that I guess he must have been a girl when he was a little boy.—Ex.

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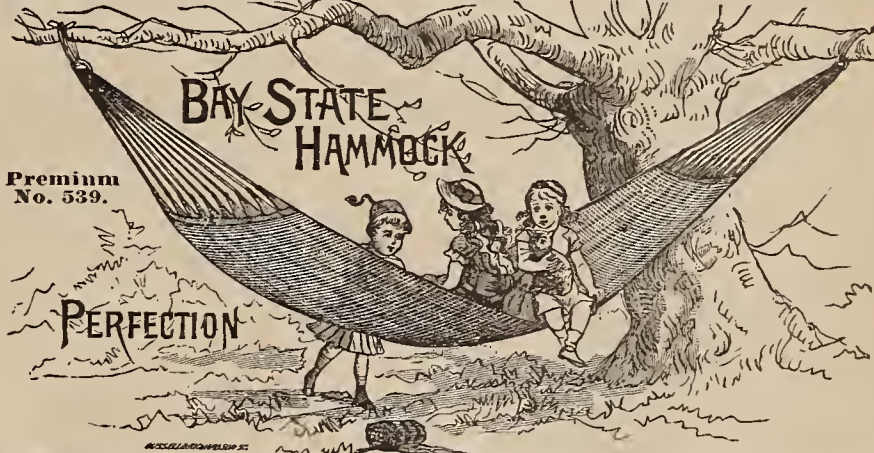


THE HOUSEHOLD COMPANION will give \$600 Cash to the 1st person sending a correct solution to this Rebus. To the 2d, \$200; to the 3d, \$100; to the 4th, a first-class Safety Bicycle, or if a lady an elegant Diamond Ring. To each of the next 10, a SOLID GOLD WATCH. To the next 25, a Beautiful \$25 Silk Dress. To the next 50, a Nickel or Gold-Plated Watch. To each of the next 50, a Genuine Diamond Ring. To each of the next 100, a valuable Business or House Lot. The above Rebus makes two words. Answers must reach us on or before Aug. 1, 1891. With your answer send 25c. postal note or 80c. In stamps for a subscription to our Illustrated 16pp. Paper, worth a dollar a year. Our August issue will announce the result of the contest, with names and addresses of the winners. We have given away over \$20,000 in prizes and premiums to our subscribers in the past two years and now have over 100,000 Circulation. Write your answer and name and address plainly, and enclose subscription money to

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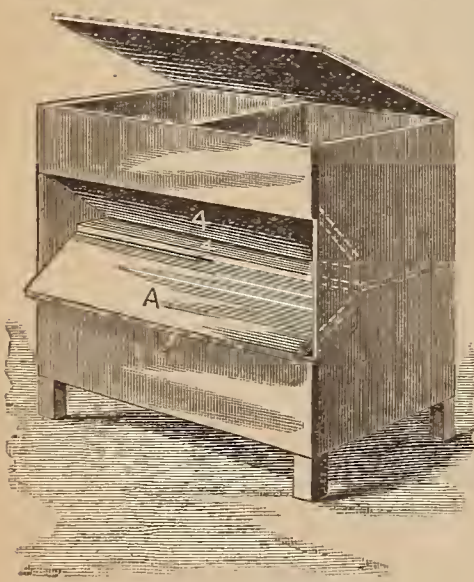
Conducted by P. H. Jacobs, Hammoncton, New Jersey.

HEN ROOSTS.

SEEING a farmer near me building a new hen-house the other day, I took occasion to give him a new idea. He was putting in his roosts in the old-fashioned way, one being above the other on an angle of about forty-five degrees. In this way the fowls are led to attempt to all get upon the highest roost, and as it gets full, the weak ones are crowded off and fall to the ground; they begin again to climb up, only to repeat the same performance, until it gets so dark that they stop climbing, resting content upon a lower roost, or even upon the ground under the roosts. In the morning the fowls will not go down as they went up, from one roost to another, but fly from the roost to the ground. In this way, and by falling from the roost to the ground at night, heavy fowls, especially when very fat or very full of eggs, are often crippled in the legs or otherwise injured. Many likely hens I have seen completely spoiled in this way. I told him that I should build the roosts all of the same height, and no more than two and a half feet from the floor, putting them about fifteen inches apart. Before I left I had the satisfaction of seeing him commence to undo the work he had done and to build his roosts as I suggested, and of hearing an old farmer who was present declare his intention of taking out his roosts, which were of the "ladder" style, and putting in new ones, level and lower. I think they will save hens enough before summer by so doing to more than pay for the labor it will take.—*Boston Journal.*

A FEED-BIN.

A feed-bin for holding several kinds of feed is from Mr. D. S. Fulton, Hanlin, Pa. It is in four sections, two stories (upper and lower). The lightest food, such as bran, is put in the upper sections, the bottoms of which are in two parts (4 4), one horizontal and the other sloping, with four-inch space between them, so as to insert the hand to draw out the feed. Divisions



A FEED-BIN.

are shown, which may be omitted, however, if only two kinds of feed are used. The lid of the lower story (A) is hinged by pushing a bolt in a hole at each end, and a strap is attached to the lid, with a nail above to hook it up. The bin should be set up on blocks so that the fowls can go under it while feeding.

ROUP.

The roup is very difficult to cure. One of the latest remedies is to add a tablespoonful of chlorate of potash to each quart of drinking water, and anoint the face with a mixture of one part spirits of turpentine and three parts sweet oil once a day, and ten drops down the throat.

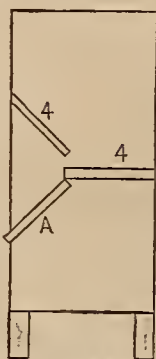
OVERFEEDING.

Bear in mind, when you feed, that a hen not laying will require less food than a laying hen. Separate the layers from the others, or you will have one half of them too fat.

Tourists find Dr. Hoxsie's Certain Croup Cure an infallible remedy for croup and coughs caused by change of climate. Address Hoxsie, Buffalo, N. Y.

INDIVIDUAL CHARACTERISTICS.

A flock of hens, though only one flock and looked upon as a collective number, is really composed of individuals that may differ as widely in characteristics as so many human beings, and this fact is nearly always overlooked, though it is a matter deserving as much consideration as any other. We are all familiar with the feeding of animals, and know how one of them may be fastidious, refusing to eat certain foods; while around the family table we find some of the members are very partial to particular dishes that are rejected by others. With the knowledge of these things, so far as they apply to animals, poultrymen seem to conduct the feeding of their flocks as though every hen in the flock was exactly like every other hen, and each ate exactly the same kind of food and the same quantity with the same relish. To attempt to estimate "how much feed a hen should have" would indict upon the party making the



END VIEW OF FEED-BIN.

estimate the duty of first learning the desire of that particular hen, as well as her surroundings, whether confined or running at large. Then he should take into consideration the season, her production of eggs, and many other details, and when such thought has to be extended to the whole flock, it is only by daily observation, weighing the food, noting the variety, and a study of each individual's characteristics, that perfect familiarity with the matter can be gained.

But if the poultryman is to become familiar with the individual characteristics of his hens, and attempts to keep large numbers, how is it possible for him to do so? It is doubtful if he can, even over a long period of time, accomplish such a purpose, but he can at least feed in a manner to cater, to some extent, to the desires of his flock, by varying the food frequently and feeding such foods as may be required for his purpose. Nature prompts the hens in their selection, to some extent, and the poultryman should at least separate his hens into flocks that are as uniform as possible. He should not have the laying hens and the non-layers in one flock, or the old hens and the pullets together. The laying hens, when producing eggs, need a nitrogenous diet, and a little care in providing them with food rich in the elements that compose the eggs will keep them in good condition. To leave them with hens that are being fatted for the market will induce them to eat the more carbonaceous food in lieu of the nitrogenous, and thus seriously interfere with the duties of both flocks.

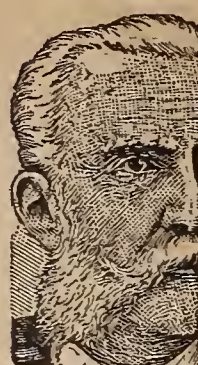
The poultryman has another privilege. He can breed for uniformity. By careful selection of those hens that are hardy and have good appetites, he can cull out many of the delicate ones, and by using some preferred breed and selecting males that will, in his opinion, transmit their qualities, a greater uniformity will be secured, production will be increased, and the labor of feeding more or less reduced by reason of a more general approach to some individual type on the part of all the members of the flock. The failures of many are due to the non-recognition of individual characteristics, and it may require a complete change of the stock in order to secure uniformity. The person who uses the pure breeds and knows their points of excellence and peculiarities, has a great advantage over him who breeds his fowls in a hap-hazard way, without regard to individual merit or the uniformity of the flock.—*P. H. J., in Rural New-Yorker.*

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heavy load on the stomach, sometimes a faint, all the time, a pit of the stomach, which food does not satisfy. Are your eyes sunken? Do your hands and feet become cold and feel clammy? Have you a dry cough? Do you expectorate greenish colored matter? Are you yawning or spitting all over the time? Do you feel tired all the while? Are you nervous, irritable and gloomy? Do you have a foreboding? Is there a giddiness, a sort of whirling sensation in the head when rising up suddenly? Do your bowels become constive? Is your skin dry and hot at times? Is your blood thick and stagnant? Are the whites of your eyes tinged with yellow? Is your urine scanty and high colored? Does it deposit a sediment after standing? Do you frequently spit up your food, sometimes with a sour taste and sometimes with a sweet? Is this frequently attended with a palpitation of the heart? Has your vision become impaired? Are there spots before the eyes? Is there a feeling of great prostration and weakness? If you suffer from any of these symptoms I will gladly send you by return mail a sample bottle of the best remedy on earth for the speedy and permanent cure of the above-named complaints. This will enable you to test my medicine free of all cost. No other medicine manufacturer can afford to do this. I know my remedy will cure you no matter how badly you suffer. Write to-day, stating your disease. A trial costs you nothing. Address **Prof. HART, 80 Warren Street, New York.**

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Smiles.

NOT LIKE THE ROLLING STONE.
 "All things come to him who waits"—
 To him who patiently doth while
 The time away
 Till fortune may
 Bestow her recompensing smile.
 "All things come to him who waits"—
 And knows no petty fear of loss;
 In just this slip
 Men lose their grip,
 And all things come—especially moss.
 —Life.

AN UNFAIR ADVANTAGE.

A DUTIFUL husband wished to give his wife a handsome lace scarf for a present, and to make sure of getting one to her liking, he asked her to buy one herself on the pretence that it was for a lady friend of theirs. The finest Honiton, Valenciennes and Brussels lace goods were spread out on the counter, but madame thought to herself:
 "What is the use of spending so much money on a present for Amelie?"
 Some embroidered lace was shown next. Even these were too dear. At length she selected a very plain and ordinary scarf.
 "Quite good enough, too," she thought, and took it home to her husband.
 "Have you chosen something pretty?" he asked.
 "Oh, yes, very pretty."
 "Is it just what you would have chosen for yourself?"
 "The very thing."
 "Then, my dear, you may keep it. I intended it for you," exclaimed her husband, delighted with his little scheme. Curtain.

IT DEPENDS ON THE CHILD.

A man down East has invented a washing-machine, the motive power of which is a swing in which a child is placed. The child swings to and fro, and the motion causes the machine to run, with the result that the family washing is done up in good shape. As long as the child does not know that it is doing any work it would seem that this would be a good scheme; but those who are familiar with the nature of children will readily see that as soon as the child finds out that the swing is connected with a washing-machine, it will suddenly take a strong dislike to the amusement of swinging and get out of it by some excuse or another.—Peck's Sun.

JOHNNY'S GREAT HEAD.

Miss Quidnunc—"You must be very fond of reading, Johnny. I never see you without a book."
 Johnny—"Yes'm."
 Miss Quidnunc—"What are you reading?"
 Johnny—"I don't know, mum."
 Miss Quidnunc—"You don't know?"
 Johnny—"No'm; I just hold the book, 'cause when ma sees me with a book she says to pa: 'Now, don't disturb that boy; don't you see how he studies? He'll make a great professor or something; let him alone and go and split the wood yourself.'"

HE WAS RIGHT.

"Have you any photographs of your children, Mr. Peck?" asked a friend of the Hon. Alpheus Peck.
 "I should say I had," answered Mr. Peck; "I've about a bushel of them."
 "Why, Alpheus!" exclaimed his wife.
 "Well, haven't we? Haven't we photographs of all four of them, and don't four pecks make a bushel?"—Detroit Free Press.

MORE APPROPRIATE.

Mrs. Homily (after church)—"How did you come to preach on backsliding, dearest? You said at breakfast that you were going to preach your sermon on profanity."
 The Rev. Dr. Homily—"I had intended to, my dear, but my collar-button got down my neck when I was dressing for church."

NO HOME-MADE PIE FOR HIM.

"We have home-made pie," said the waiter lady in the Woman's Exchange.
 "Excuse me," said the pallid young man, as he reached for his hat and started for the door. "I was looking for a bakery pie. I was married only last month."—Peck's Sun.

CUPID UNDER ARREST.

Mr. Pulliam (about to propose)—"Miss Sanford, I am now going to say what I wanted to say an hour ago. Can you not guess from my eyes what it is?"
 Miss Sanford—"Do you mean 'good-night'?"
 You look sleepy."—The Epoch.

A NEW VERSION.

Teacher—"What was the fate of Lot's wife?"
 Scholar—"She was turned into salt."
 Teacher—"What for?"
 Scholar—"For looking back to see if the woman who had just passed her had on a seal-skin or plush sacque."

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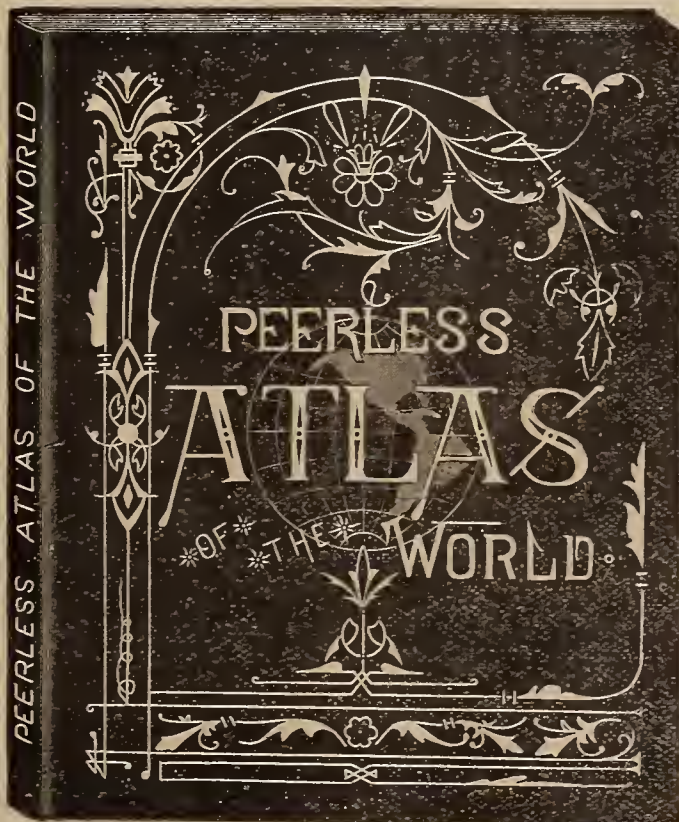
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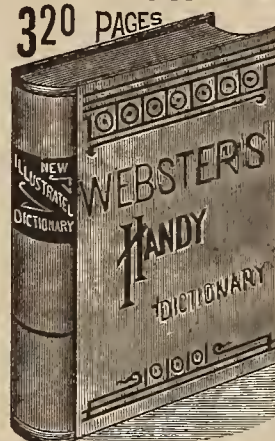
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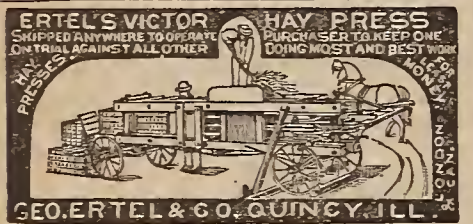
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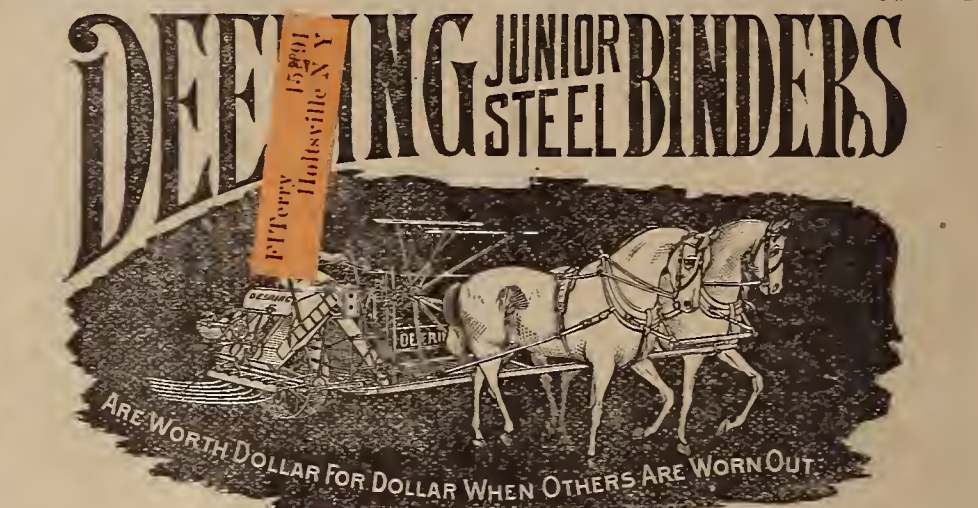
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EASTERN EDITION.

VOL. XIV. NO. 18.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, JUNE 15, 1891.

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Current Comment.

UNDER the name of the National Union Conference, a convention was held in Cincinnati last month for the purpose of forming a new political party. Of the 1,400 delegates in attendance, over 400 were from Kansas and over 300 from Ohio. The South, where the Alliance is strongest, sent few delegates. The convention was not a representative one, but as far as it could go it did the preliminary work of forming a new party and named it the People's Party. The delegates represented various agricultural, industrial and so-called reform organizations, but they succeeded in uniting on the following platform:

1. That in view of the great social, industrial and economical revolution now dawning upon the civilized world, and the new and living issues confronting the American people, we believe that the time has arrived for a crystallization of the political reform forces of our country and the formation of what should be known as the People's party of the United States of America.

2. That we most heartily endorse the demands of the platforms as adopted at St. Louis, Mo., in 1889; Ocala, Fla., in 1890, and Omaha, Neb., in 1891, by industrial organizations there represented, summarized as follows:

a—The right to make and issue money is a sovereign power to be maintained by the people for the common benefit; hence, we demand the abolition of national banks as banks of issue, and as a substitute for national bank notes we demand that legal tender treasury notes be issued in sufficient volume to transact the business of the country on a cash basis, without damage or especial advantage to any class or calling, such notes to be legal tender in payment of all debts, public and private, and such notes, when demanded by the people, shall be loaned to them at not more than 2 per cent per annum upon non-perishable products, as indicated in the sub-treasury plan, and also upon real estate, with proper limitation upon the quantity of land and amount of money.

b—We demand the free and unlimited coinage of silver.

c—We demand the passage of laws prohibiting alien ownership of land, and that Congress take prompt action to devise some plan to obtain all lands now owned by alien and foreign syndicates, and that all land held by railroads and other corporations in excess of such as is actually used and needed by them, be reclaimed by the government and held for actual settlers only.

d—Believing the doctrine of equal rights to all and special privilege to none, we demand that taxation, national, state or municipal, shall not be used to build up one interest or class at the expense of another.

e—We demand that all revenues, national, state or county, shall be limited to the necessary expenses of the government, economically and honestly administered.

f—We demand a just and equitable system of graduated tax on income.

g—We demand the most rigid, honest and just national control and supervision of the

means of public communication and transportation, and if this control and supervision does not remove the abuses now existing, we demand the government ownership of such means of communication and transportation.

h—We demand the election of president, vice-president and United States senators by a direct vote of the people.

3. That we urge united action of all progressive organizations in attending the conference called for February 22, 1892, by six of the leading reform organizations.

4. That a national central committee be appointed by this conference, to be composed of a chairman to be elected by this body, and of three members from each state represented, to be named by each state delegation.

5. That this central committee shall represent this body, attend the national conference on February 22, 1892, and if possible, unite with that and all other reform organizations there assembled. If no satisfactory arrangement can be effected, this committee shall call a national convention not later than June 1, 1892, for the purpose of nominating candidates for president and vice-president.

6. That the members of the central committee for each state where there is no independent political organization, conduct an active system of political agitation in their respective states.

In addition to the above platform the convention adopted the following resolutions:

Resolved, That the question of universal suffrage be recommended to the favorable consideration of the various states and territories.

Resolved, That while the party in power in 1869 pledged the faith of the nation to pay a debt in coin that had been contracted on a depreciated currency basis, and payable in currency, thus adding nearly \$1,000,000,000 to the burdens of the people, which meant gold for the bondholders and depreciated currency for the soldier; and holding that the men who imperiled their lives to save the life of a nation should have been paid in money as good as that paid to the bondholder, we demand the issue of legal tender treasury notes in sufficient amount to make the pay of the soldiers equal to par with coin, or such other legislation as shall do equal and exact justice to the Union soldiers of this country.

Resolved, That as eight hours constitute a legal day's work for government employees in mechanical departments, we believe this principle should be further extended so as to apply to all corporations employing labor in the different states of the Union.

Resolved, That this conference condemn, in unmeasured terms, the action of the directors of the World's Columbian Exposition on May 19, in refusing the minimum of wages asked for by the labor organizations of Chicago.

Resolved, That the attorney-general of the United States should make immediate provision to submit the act of March 2, 1889, providing for the opening of Oklahoma to homestead settlement to the United States Supreme Court, so that the expensive and dilatory litigation now pending there be ended.

THE following extracts from a subscriber's letter on the money question are specimen samples from the collections of the rag-money pickers:

It is astonishing how much prejudice and blind dogmatism exists in the minds of the people in regard to a just monetary system; how they prate of "flat" money and irredeemable paper money, etc. They, the learned ignoramuses, presidents of colleges, bank presidents, etc., don't understand the first principles of a just monetary system. The proper functions of money are two: first, evidence of debt; second, a full legal tender for all debts, public and private. That alone is money which the law makes money; consequently, there can be no other money than fiat money. The idea that gold or silver money has absolute or intrinsic value in its material to the amount of the units called for on its face, is an old dogmatic humbug, handed

down to us from the institutions of despotism, ignorance and tyranny. An evidence of debt, stamped by the government on a piece of paper, is much better than the same evidence stamped on gold, as the paper costs less than the gold, and taxation is lessened that much.

Who should care if it is not redeemable in any one thing in particular, but everything in general that may be for sale. That is the best money that was ever invented, and it should be felony for any one to either give or take interest for its use. The public debt of every people should be represented by the volume of its currency in circulation, and should never be interest bearing.

Paper currencies based on gold and silver are the ones that have always failed, and always will, and ought to fail. That plan is like trying to stand a pyramid on its apex, which is bound to tumble.

There is nothing new, original or important, but much of error in these statements. They are given simply to show what a strong delusion holds the advocate of fiat money. If the one who made them were to take a new, full-weight, twenty-dollar gold coin, pound it on an anvil with a hammer until the stamp of the government had been defaced, and then find out that he could sell the metal to a goldsmith for twenty dollars, he probably would not believe the evidence of his senses. Let him make the experiment. At the same time let him make another. Deface a twenty-dollar United States treasury note, and find out that it is then worth only about one half cent per pound. The latter experiment would probably dispel his delusion that "an evidence of debt, stamped by the government on a piece of paper, is better than the same evidence stamped on gold."

Again, the government stamp on a gold coin is not "an evidence of debt," but an evidence of its weight, purity and value. The government does not attempt to make money out of nothing. That would be fiat money. The idea that a just monetary is based on debt, and that the volume of paper currency in circulation should represent the debt of a nation, are other absurdities that deserve no further attention than to mention them as evidence of the blindness of the deluded believers of fiat money.

THE Farmers' Union, of Ohio, an organization composed of delegates from the various agricultural organizations of the state, held a meeting at Columbus the last week in May. As the principal object of the meeting was to decide on the question of a new party, it attracted much attention. After a long and animated discussion, the new party proposition was defeated by one vote. However, this decision does not settle the party question. It simply means that the delegates who favor forming a new party in this state failed to secure the endorsement of the Farmers' Union. Probably most of them will meet with others who favor forming a new party in a convention called to meet at Springfield, in August, for the purpose of nominating a full state ticket.

The Farmers' Union acted very wisely in defeating the new party proposition. The farmers of Ohio do not need a new party. In the last legislature they secured the passage of practically every measure they demanded, with the exception of the reduction of railroad rates and free school-books. They can secure more members of the next legislature by attending the caucuses of their respective parties and

nominating candidates who will work for their interests. By this plan they will be sure of many. Through a new party they do not have a very good chance of electing any.

The convention adopted the following platform:

We, the delegates representing the several organizations of Ohio, in convention assembled in the interest of good government and the welfare and prosperity of the entire people of this state and nation, and claiming equal representation in our law-making bodies, both state and national, for farmers, declare in favor of the following principles, and we will work and vote for their enactment into law:

First—Equal and fair distribution of the necessary burden of taxation on all forms of wealth to be listed at actual value, less actual indebtedness.

Second—A system of school-books at actual cost.

Third—Suppression of all traffic of intoxicating liquors as a beverage.

Fourth—Suppression of free railroad passes or other gifts to legislators, judges of courts, county auditors and other public officials.

Fifth—That we demand the issue of not less than \$50 per capita of full legal tender money, to consist of gold and silver, on a parity with each other and paper.

Sixth—For the carrying out of this declaration of principles, we declare in favor of and recommend to the farmers of Ohio to see to it that no man be nominated or elected a representative or senator from any agricultural county or district in Ohio, who will not stand squarely on this platform.

Seventh—To this end we call upon and invite all laboring and legitimate business men to co-operate with us.

There is no sub-treasury or land-loan scheme in this platform. The farmers of Ohio are too level headed to be induced by visionary agitators to adopt such wild schemes.

FROM the report of the secretary of agriculture for 1890 we take the following statistics: In 1890 the production of corn was 1,489,970,000 bushels from 71,970,763 acres. The total value of the crop was \$754,433,451. The average value per bushel was 50.6 cents; the average yield per acre was 20.7 bushels, and the average value per acre was \$10.48. For the past eleven years the average yield per acre was 23.8 bushels, and the average value per acre \$9.58. Did it pay? No.

For the past eleven years the average yield per acre of wheat was 12 bushels and the average value per acre \$9.91. Did the average wheat crop pay? Count up the cost of production and see if you can make it less than \$10 per acre.

For the past eleven years the average yield per acre of oats was 25.8 bushels, and the average value per acre was \$8.24. Did it pay?

It is safe to say that no profit is made in raising the average crop of corn, wheat or oats. What, then, can be said about the crops that run below the average? In order to make the average, half the crop grown must fall below it. A crop of wheat, corn or oats less than the average is certainly produced at a loss. It was a loss of labor or money, or both. The aggregate value of the corn, wheat and oats crops for the past eleven years is nearly \$1,230,000,000. Think of over \$600,000,000 of business being done at a loss. No other business in the world besides farming would stand the strain so long. The fact is, farming cannot stand it. Is it any wonder that farmers complain of hard times? Is it any wonder that farm-mortgage indebtedness is steadily increasing?

FARM AND FIRESIDE.

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Our Farm.

SUGGESTIONS FROM CURRENT STATION AND OTHER BULLETINS.

BY JOSEPH (T. GREINER.)

**SOME POTATO EXPERIMENTS.**—Director R. P. Speer, of the Iowa Agricultural Experiment Station, says, in bulletin 12, that he has conducted many experiments without being able to discover why potatoes are inclined to degenerate, or why the single-eye pieces come out ahead one year and fall behind the next.

In regard to the degeneration of potatoes, the matter is simple enough without a single experiment. Our whole methods of propagation are of a kind that must necessarily lead to just such results. I will name a single instance: This spring the Freeman potato is sent out at \$3.00 a pound. Of course, everybody makes that pound of seed go as far as possible. Not only this, but the introducer has made contracts with several growers to plant one or more barrels, he furnishing seed and agreeing to pay a certain sum per bushel for the whole crop. The premium here is on quantity. Consequently, each one of these men will make the barrel of seed go over as large a patch as possible, and the seed pieces will be cut very, very small. While the variety now is as vigorous a grower as we seldom meet, how long of such treatment and continued dwarfing of the vines will it take to see this variety classed among the sorts that "have run out?" Dwarfed from year to year, it must run out—cannot help it. This is the reason why our best new varieties, which

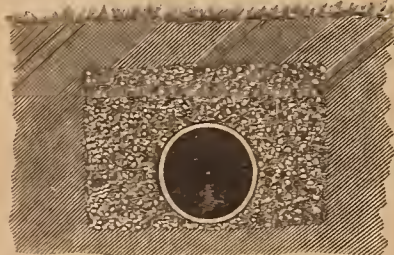


FIG. 2.

Sewer-pipe culvert protected with "chock."

are usually the thriftiest growers and heaviest yielders, degenerate in a very few years, and new ones, originally no better than many other varieties originated during the past twenty or more years, when in their prime.

It is also plain enough why Capt. Speer is unable to tell us the reason why the single-eye pieces come out ahead one year and fall behind the next. It is not true. I have for ten or fifteen years annually tried single eyes against heavier seeding, and favored them all I could; but have

never yet, in a single instance, seen as large a yield as that obtained from heavier seeding. Single-eye planting is a delusion and a snare, and light seeding responsible for a great many light crops that might have been more profitable with a little more liberality in the use of seed.

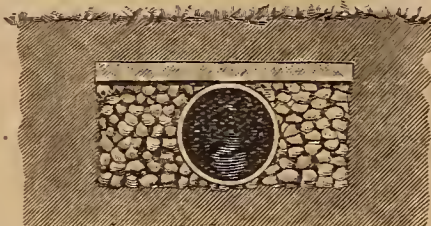
Capt. Speer's experiments have shown that good crops cannot be produced when unripe potatoes are used for seed. While he has never noticed anything that would indicate that one end of a thoroughly ripe, medium-sized potato is better for seed than the other, yet our potatoes, he says, are injured so often by drouths, weeds and other unfavorable conditions, that it is unsafe generally to plant little potatoes or the seed ends of potatoes. For Iowa he would prefer the Early Ohio, Rural New-Yorker No. 2, New Champion, O. K., Mammoth and Blue Victor potatoes before other varieties.**POTATO STALK WEEVIL.**—This little beetle, the larvæ of which burrows into potato stalks and consumes part of their substance, has been found to do much damage in some sections of the United States, especially in Pennsylvania. The entomologist of the Iowa station tells in the aforesaid bulletin 12, that he has found

FIG. 3.

Sewer-pipe culvert with sides protected by small stones, which support a flat stone cover which is covered with earth.

the weevils abundant in the stems of two species of *Physalis*, or ground-cherry (alkekengi). These and perhaps other species of the same genus seem to be the native food plants of this beetle. Nearly all of the old stems of the ground-cherries examined were found to be infested. From one to a half dozen beetles are found in a single stalk, and three or four is a very common number. The entomologist suggests planting a patch of ground-cherries in the vicinity of the field of potatoes as a probable means of protecting the latter from attack. By pulling the stems in late fall or winter and burning them, a great number of beetles would be destroyed and the attack of the future potato crop lessened. The dead stalks of the wild plants of this genus should also be sought out and destroyed by fire.**PLANT DISEASES.**—The report of the chief of the Division of Vegetable Pathology, United States Department of Agriculture, has just been received. Prof. Galloway gives the results of experiments made for the purpose of checking the various blights on tree and small fruits—scabs, grape rot, anthracnose of hollyhock and cotton, etc. On the whole, the ammoniacal solution of copper carbonate is found to be effective for the majority of these diseases, and cheaper and more convenient to use than the Bordeaux (lime) mixture. The latter, however, proved most effective for the pear-leaf blight, especially in nurseries. In the treatment of pear scab the following conclusions are reached: (1) Early treatments (that is, before the fruit is half an inch in diameter) are absolutely necessary to prevent the scab. (2) Spraying after the fruit is half grown is liable to injure the latter. (3) The Bordeaux mixture and ammoniacal solution are the only preparations which give really satisfactory results.

In regard to raspberry and blackberry leaf blight it has appeared that (1) the foliage of the raspberry is delicate, and cannot endure applications of a corrosive nature; (2) the foliage of the blackberry, though more resistant than that of the raspberry, is more susceptible to injury than that of the apple; (3) none of the treatments given are to be recommended for the raspberry, and of the materials used only the copper carbonate solution can be pronounced beneficial in the case of the blackberry. For the hollyhock blight, the Bordeaux mixture gives some promise.

HIGHWAY CULVERTS.

All thinking men are agreed that permanence should henceforth characterize work on the public roads. The dilly-dally, slipshod, hand-to-mouth tinkering for the time-being methods once in vogue, have had their day, and intelligent roadmasters

now study to make work count in the line of excellence as well as utility.

Wooden-box culverts are rarely put in now except in the newer counties, stone generally taking their place. There are occasionally places where the great difference in expense between wood and stone and the small quantity of water to be passed makes it proper to use plank, and in such cases none but sound plank should be used, and these put together to last as long as possible. The side plank should rest on the bottom and the top on the sides. The top plank should be the best of the lot. Where but one plank wide is used, it is customary not to give any support save that of the edges of the side planks. This does well enough for awhile, but the life of such a culvert can be extended a number of years by cross-bars of iron. Old grate-bars or heavy wagon-tire, set into the side planks edgewise, will support the center and prevent caving in or settling down of the top plank.

Last summer I passed a farmer and two boys engaged in putting in a box culvert about twelve inches high and eighteen inches broad. The planks all seemed good except one of the wide ones, which was checked through the heart for five feet at one end and four feet at the other, exactly as is represented in Fig. 1. As the plank was but sixteen feet long, there was but seven feet of whole plank. The trench was ready, and the man was telling the boys to roll in the box as I passed. It would come cracked side up, and I begged him to have it turned over, so the whole side would be where the most resistance was needed; but in a loud voice he repeated the order, and in it went. Had the good plank been on top, supported by pieces of old tire, the culvert would last several years longer than it will as it is.

Last winter I heard this same man complaining how the monopolists were grinding the farmers, and it occurred to me that farmers who thus wasted public property entrusted to their keeping were virtually helping to oppress themselves.

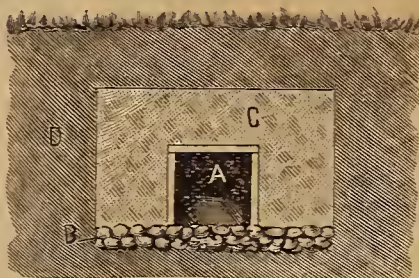
Sewer-pipe makes an excellent and lasting substitute for plank, but it is liable to break through in soft weather and injure horses. In Summit county, where large quantities of sewer-pipe are made and there is plenty of broken waste, called "chock," sewer-pipe culverts have been put in and

FIG. 4.

Concrete culvert—A box, or water passage; B cobblestone foundation; C concrete—Portland cement, sharp sand and broken stone; D earth.

covered one foot or more deep with "chock," which forms an impenetrable mass that cannot be broken through. In regions remote from factories, the sewer-pipe can be covered with flat stones, or small stones filled with concrete.

Very excellent culverts can be built entirely of concrete, making a wooden box of inch boards and filling all around with concrete. When made in the spring with Portland cement, such culverts become solid stone tubes, indestructible as sandstone. Made late in the season, the frost will destroy them before they become solidified. Lastly, iron pipes, such as are used as water mains, make indestructible small culverts, but are expensive.

Summit county, Ohio. L. B. PIERCE.

THE DAIRY.

The main business of the dairy must of necessity be butter-making. The twenty million pounds of cheese manufactured in Ohio only requires the milk of about one tenth of the cows. The butter industry, as at present managed, is not nearly as profitable as it might be. Winter is the time to make butter cheaply and to the best advantage. With the aid of warm barns, the silo and ensilage, the farmer who will then persist in pushing the dairy business in the summer months is making a very sad mistake.

The cool weather of October, and from that time until May, cream can be secured from milk with the least possible cost and trouble. All there is to do is to set the milk in deep sitting-cans with covers on

them to keep out dirt or dust, and also to prevent cream from crusting over hard, as it will in open-pan sitting, placing the cans in any cool room of the house away from the fire, and in from twenty-four to thirty-six hours every particle of the cream will rise while the milk is yet sweet. The soft cream can then be dipped off with a small, conical-shaped tin dipper and put into a large cream-pail to ripen. When enough accumulates to make a churning (leave the cream-pail also in the

FIG. 1.
Imperfect plank.

cool room, with cover on it, until there is cream enough to make a churning), it should be set in a warm room near a stove or the fire and allowed to warm up to about 70°, and every little while it should be thoroughly stirred up so it will ripen. Even cream at skimming time should always be stirred up thoroughly when adding fresh cream to that being held. I let mine stand in such a warm room one day in cold weather, and by the close of the day it will be ripe enough; that is, it will be acid enough to begin to thicken up by morning. It will then be cool again and in very near the proper condition for churning.

I churn with cream at 66° in winter or cold weather, and at 58 to 60° in hot weather. We use a No. 4 box churn for this work when done at our house, because it churns it exactly like our large creamery churns, and every particle of the cream is made into butter almost at the same moment, while with paddle churns or dash churns no such good work can be done, for when some of it comes to butter there is lots of unchurned cream sticking to the cover or near the top of the dash or paddle churns, which must be scraped down into the churn and then churning resumed until that comes to butter; and by the time that is done the little butter pellets of the first churning are all gathered into a mass, and it is then impossible to wash the butter free of buttermilk, and the whole job ends in eight or ten-cent store butter—white, salvy stuff, hardly fit to eat. While with a square box concussion churn, or a barrel churn, as soon as the butter comes into little pellets about the size of buckshot, you must stop churning, open the churn, add about one fourth as much clear, cold water as there was cream in order to loosen the buttermilk from the little pellets of butter, and also to cool them up a little. After letting it stand in this cold water fifteen or twenty minutes, draw off all this buttermilk and water and add good, clear, cold water freely, ten quarts to eight or ten pounds of butter. Stir it all up together, or close up the churn and give it one or two turns, but be careful and not overdo it and gather the butter into lumps. Let it stand in this washing fifteen or twenty minutes longer, and then draw it off as before, and that second washing will be worth saving for feed purposes; but put in water, then, the third time for final finish, same as before, and let it stand in the churn until the butter gets cold and hard (I usually wait about half an hour); then with a skimmer ladle you can easily dip the little butter pellets out of the churn, and when at last you come to the water, if the job has been well done, the water will be almost clear.

All that remains to finish that butter is to place it on a fluted hand butter-worker, press out the water and at the same time add one ounce of salt to the pound of butter, the best dairy salt you can buy. You should then pack it down in tubs or jars, if you ever do it, or make it into balls, rolls or prints. Never rework that butter or do anything to injure the grain of it, or make it into ten-cent store butter salve.

This is precisely the manner we make our best creamery butter in our large creamery, where we work up the cream daily from the milk of one thousand cows or more. Our creamery churns run by steam power, and also the butter-worker. But at my own home, in the winter season, when we do not run our large creamery, we churn it by hand, producing precisely the same results; and with our hand butter-worker, which costs only \$6, we can do perfect work and make the very highest priced and best butter of any market.

Fresh milch cows' cream in winter time,

when fed on ensilage, churns into butter as easily as in summer. There is no farm work to interfere with milking the cows regularly. Commence milking the cows every morning at 5 o'clock, and milk in exactly the same rotation for each cow every time. The cows will then be ready for you and give down their milk. Do all the chores in the winter time before dark, but commence milking in the afternoon at exactly five o'clock. You have then divided the day evenly, and if you have cleaned the stables well, milked about fifteen or twenty cows twice, taken care of thirty or forty head of stock, and hauled wood, saw-logs or some such work four or five hours each day, you are then in good trim to go to Grange or Farmers' Alliance in the evening, or read the newspapers until bed-time; and it makes a good, fair day's work of it and furnishes profitable employment for winter months.

You should color butter all months of the year except in flush feed of pasture grasses, and you should adopt the June butter color of your herd as the standard color of your butter the year around. By a little practice with prepared butter color you can make it exactly alike at all times of the year.

The hot weather will be upon us by the time you read this article, and we must change the above easy conditions of butter making to surmount great difficulties and do perfect work. You now need the tall, deep-sitting milk-cans and a good, large water-box made of 2-inch plank, deep enough to set in all the cans you need for your milk. Then if you have an ice-house, and are prepared for summer dairying, you can put in one or two cakes of ice each day into this water and close down the cover of the box and thus secure the cool conditions necessary to secure the cream in twenty-four hours, and before the milk gets sour.

Sweet, skimmed milk is very valuable to feed to pigs or calves, and its actual worth for that purpose is fully twenty cents per hundred pounds; I consider mine worth twenty-five cents. The cream must now be kept in this same cool place until a churning is ready, stirring the whole mass together each time you add a skimming. Then let it stand out in hot weather a few hours and it will begin to sour and thicken, when it is ripe enough to churn, but must be placed back in the cold water and the temperature reduced to 58° before churning in the summer time, and then do with it as before stated.

To milk cows in summer time is a terrible hot job; the flies bother, the cows kick, the milkers cuss (when the boss don't hear it), and the field work is crowding badly every moment. When all these difficulties stare the farmer in the face, why in heaven's name will he so foolishly persist in making ten or fifteen cent butter out of his big flow of milk? Would it not be far more sensible and profitable to have his cows come in fresh milk in September, October and November, and do the dairy work when butter brings twice the money it does in summer time, and not half the trouble to make it?

We omit our butter making at the house in summer time, because we have the largest creamery in Ohio, with every convenience—ice and cold storage—but our great volume of cream from our own dairy comes to us in winter months. We use the Fairlamb five-gallon can; it holds forty pounds of milk. We put in thirty-five pounds of milk and five pounds of clear, cold water to cool the milk quicker, and also thin it some and permit the cream globules to rise easier and quicker from the milk. Any deep, covered tin pail will give us just as good quality of cream as our Fairlamb can, or any other kind of a patent milk-can on earth. But if you send cream to a creamery part of the year, it is convenient to have a kind of can that registers the spaces of cream so it can be counted as pounds of butter.

A good plank water-box that every farmer can make for himself in half a day at most, will do just as good a business for him as the most expensive creamery on sale. We have all our patrons use these cheap water-boxes and the Fairlamb can, and no person on earth can beat the butter we make from this way of doing the business. If better butter is ever made it is due to sweeter pasture grasses, purer air or water or some such influence.

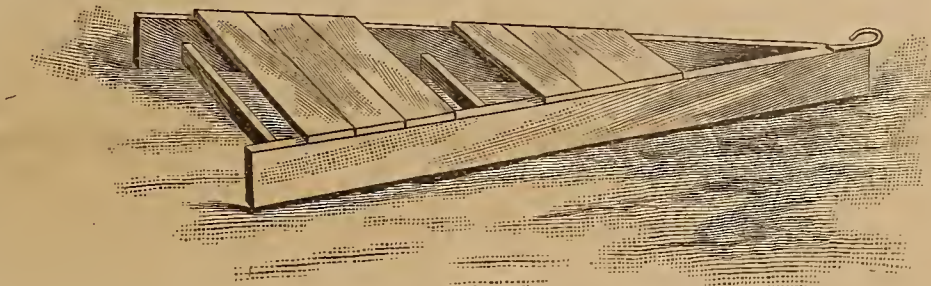
H. TALCOTT.

HYBRIDIZING.

In plants there can be no absolute rules to govern the hybridizer, for no one knows what species will or will not hybridize, whether they belong to the same race, genus, order or family or not, until it is tried. Yet it is a very general rule that a species will not hybridize with another species, no matter how near they are related in family ties. Yet there are a great many exceptions; therefore we may experiment with all.

Then, to get at the mode of procedure to gain hybrids, we will take two species quite near each other in the same family—say, the common, wild crab-apple of North America and the common apple, those two species of the sub-genus *pyrus*, having flowers very nearly alike in all particulars, both having perfect or complete flowers.

Spring opens. We select the apple-tree we wish to operate on, or, for the mother plant, we select a small twig in a favorable part of the tree for fruit, full of flower-buds; we watch these carefully, and when the petals (turn to your structural botany and find out what all these words mean) are full size, but not yet beginning to open out and expose the delicate organs they have so far covered to the open air, we carefully part them, and then, with a pair of sharp scissors, cut every stamen with its capping anthers, being careful to remove them all outside of the flower-cup, and also at the same time being very careful not to injure the pistils or the stigmas at their top. After all the flowers on our little twig have been carefully operated on, we deftly cover the whole little branch with a bag made of very thin, light-glazed muslin—tissue paper would do, but is liable to be injured by wet or wind—and tie it snugly around the twig. It should be large enough so as to not rest on and smother, or abrade the flowers. We emasculate, in this way, the flowers on as many twigs as we can or wish, in prefer-



A HOME-MADE DITCHER.

ence to using twigs of different apple varieties. We then, as the apple blossoms open, carefully watch the stigmas in them, and when we see the upper surface of the stigmas become moist, we know they are stigmatic, or in sexual heat and ready for pollen. We have ready a little box with a close-fitting cover, lined on the inside with white, soft tissue paper, and a small, soft, camel's-hair brush or pencil, and hasten to our selected wild crab-tree for the male element (pollen), when, lo and behold, it is not in bloom yet, and shows no signs of blooming for ten days or two weeks, so our work seems to be lost. Well, we should have known in the start that the crab often blooms two weeks later than the apple, and this mishap should teach us that, especially in hybridity, we should think before we act. A happy thought strikes us and we rush to a pear-tree for pollen, in hopes of a hybrid between that and the apple, but find that the pear has bloomed before the apple and its pollen is all shed. Here is another chance for thought before action. If we wish to gain a pear and apple hybrid, we should choose the apple for the mother plant. Why? If we gather the pollen of the great majority of plant species and put it in a box as above, it will remain potent and good for some time; some for days, weeks, months, and with some, even until the next year.

Now, after the above lessons, we will say that this particular time we found the crab-tree in full bloom and the anther sacks on the end of the stamens bursting with pollen. From 10 A. M. to 2 P. M. is the best time, usually about 10 A. M., if the morning is bright and warm, for gathering pollen. We brush them over lightly with our brush, and if the bright, yellow dust (pollen) floats away in the air, we know the pollen is ripe, so we carefully snip off a few flowers, letting them fall, stamens down, into our box and place on the lid. The next morning (for our flowers under the covers will not become

stigmatic so early as those exposed), about ten o'clock, we uncover a twig and carefully examine (with a magnifying-glass is best) the stigmas of the emasculated flowers to see if they are moist. If so, we slap the box with the flowers in smartly with the hand, wait a minute for the pollen dust to settle, then open it, take out the flowers, giving them a shake as lifted; then, with the tip of the brush very slightly moist, we take up the pollen and apply it to the sticky surface of the stigmas, replace the sack and our work is done. This should all be done as quickly as possible, being careful that none but the pollen applied reaches the stigmas. In one or two days the bag should be removed, and then in two or three weeks, if the young fruit swells and looks of a healthy, dark green, we may consider that pollination has been perfect; and if the fruit matures and forms seeds, the seeds are planted and grow and result in trees, we may be quite sure that the trees are hybrids between the two species operated on. What kind of fruit we may expect or get from such a cross may be worth speculating on. D. B. WIER.

California.

A HOME-MADE DITCHER.

Take two pieces of 2 by 12-inch lumber, 12 feet long (10 feet will do very well, however). Bevel or miter one end of each piece so as to fit together nicely when the hindmost ends are about four feet apart. Nail them together in the form of a V (see engraving). Near the bottom, and about a foot from the ends of this frame, secure a brace of 2 by 4-inch scantling, set edge up and well nailed. Put another brace about midway of the frame, and also near the bottom or lower edge. These braces prevent the pressure of the dirt from breaking the frame. Nail some wide plank across the top for the driver to stand on, and also to lay additional weight upon if necessary. The weight of this

ditcher can be made to correspond with the strength of your team. Either two, four or even six horses can be worked to it, and the weight can be increased or diminished accordingly.

Plow the ground well where you want your ditch, just as you would if a scraper was to be used. Follow the plows with the ditcher, alternately, until your ditch is of proper depth. For shallow, open ditches this device does the work more rapidly, a good deal, than you can do it with scrapers. DICK NAYLOR.

SOME FERTILIZER QUESTIONS.

BY JOSEPH.

PHOSPHATIC GUANOS.—A Baltimore correspondent takes me to task for having stated, in reply to an inquiry, that the average "guano" in the market contains no other plant food except phosphoric acid. The trouble is with our nomenclature of fertilizers and the fact that many farmers are entirely at sea about the character and composition of the various concentrated manures offered by fertilizer firms. Everything in the shape of such manures with them is "phosphate," or perhaps "guano." The genuine Peruvian guano is a high-grade and therefore costly article, especially rich in nitrogen. But

this guano is now getting scarce. The mere phosphatic guanoses are offered under the name of the respective localities where found, such as Orchillo and others. They contain no other important plant food besides phosphoric acid; in other words, are a simple phosphate. The manufacturers of fertilizers in Baltimore and other places of course make "guanoses" and other fertilizers to suit special purposes, some high grade, some low grade, some containing all three chief elements of plant food in fairly well-balanced proportions; others containing only one or two, and being either incomplete or one-sided, special-purpose manures.

It is not long since I have given a series of articles on practical farm chemistry in these columns, in which I have attempted to make all these things plain to the reader, and I have been greatly gratified by the sure signs of an existing or awakening interest for all these things on the part of the readers of FARM AND FIRESIDE.

The subject is a complicated one, and it goes clear back to the very elements of chemistry; consequently, it is not often that a paper can afford to devote space enough for the full explanation of the underlying principles in agricultural chemistry. At the same time, the modern farmer, who is a buyer of manurial substances and a user of purchased manures, cannot afford to be ignorant of these principles. To protect himself against imposition and to use manures economically and effectively, he must learn to understand the true nature of the plant foods. A careful study of the subject will pay him well.

APPLICATION OF POTASH SALTS.—A reader desires information how and in what quantity to apply kainit, sulphate of potash, etc., to pear, peach and apple trees on gravelly, clay soil, and also for red raspberries. Some of these potash salts, and wood ashes as well, are excellent fertilizers for fruit crops if supplemented with bone meal or acid phosphate. Muriate of potash is usually the cheapest source of potash, and answers the purpose as well as the higher-priced sulphate. Kainit is also good for fruit-trees, especially for peaches. A half ton of kainit is not too much a year for bearing orchards, while two or three hundred pounds of muriate per acre would be about right for every heavy crop of fruit taken off. Of bone-dust, use about half the weight of kainit or twice the weight of muriate. The application itself should give little trouble. Sow it in fall, winter or early spring, broadcast, the same as you would plaster. Any one of these potash salts, however, is much more convenient to handle than plaster or the average concentrated fertilizer. Muriate and sulphate of potash are clean, and as easily sown as ordinary salt. Kainit is finer and more dust-like.

HEN MANURE FOR TOBACCO.—A Kentucky subscriber desires to apply a mixture of fresh and old hen manure in the hill for tobacco. I have little experience with the tobacco plant and know little about its requirements from personal observation. The plant contains a larger percentage of potash than any other I know of; consequently, I am sure that plenty of potash should be provided for it, and nitrogen is also needed in good supply.

Consequently, I would consider hen manure a first-rate fertilizer for the crop, and if the soil were especially hungry for potash, I would recommend the additional application of wood ashes. Try a couple of handfuls of hen manure to the hill, well mixed with the soil. More of it would do no harm.

If You Feel Tired

Weak, worn out, or run down from hard work, by impoverished condition of the blood or low state of the system, you should take Hood's Sarsaparilla. The peculiar tonic, purifying, and vitalizing qualities of this successful medicine are soon felt throughout the entire system, expelling disease, and giving quick, healthy action to every organ. It tones the stomach, creates an appetite, and rouses the liver and

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Our Farm.

NOTES FROM MY HOME GARDEN

BY JOSEPH.



CARBONATE OF COPPER.—The ammoniacal solution of carbonate of copper has proved so effective in preventing a whole list of plant diseases, is so easily prepared and applied, and consequently so generally and highly recommended, that no doubt many readers of FARM AND FIRESIDE will wish to give it at least a trial on a moderate scale. I, for my part, am using it freely on almost everything—even on my tomato plants—as a precaution against the leaf blight, which had invaded my tomato patch last year, doing considerable damage, and again shows its presence on my Early Ruby plants, of which I am setting about five hundred.

The great problem with the majority of people whose operations, like mine, are on a rather small scale, is where to get the carbonate of copper, as it cannot be bought in the average drug-store. I get over this difficulty by using Powell's prepared mixture (copperdine), advertised in the advertising columns of FARM AND FIRESIDE. This works first-rate, and is in a very handy form. A quart, costing 50 cents, is sufficient to make 22 or 25 gallons of spraying liquid. In larger quantities the manufacturers sell it much cheaper.

Yet it is not necessary for any one to go further than the nearest drug-store for the materials needed to make the ammoniacal solution of copper carbonate, even if the last-named article is not kept in stock. It can easily be prepared at home by any one. Buy two pounds of sulphate of copper (bluestone) and two and one half pounds of carbonate of soda (salsoda). Dissolve the former in a large quantity of hot water and the latter, in another barrel or tub, in hot water. When both ingredients are dissolved and cooled, pour the soda solution into the copper solution, stirring rapidly. The result will be a blue-green precipitate of carbonate of copper. Allow this to settle to the bottom of the vessel. Now draw off the clear liquid above the sediment, fill the vessel with fresh water and stir up the contents thoroughly. After the copper carbonate has once more settled to the bottom, again draw off the clear fluid above. The carbonate may now be removed from the vessel and dried, when it is ready for use. From the amount of bluestone and salsoda given above will be produced one pound of copper carbonate, and the amount of each necessary to produce any given amount of copper carbonate is easily calculated. These directions were given by Dr. Thaxter, of the Connecticut Experiment Station.

The old formula for making the ammoniacal solution called for aqua ammonia or liquid ammonia of a certain strength. An improvement on this formula is the following: Mix three ounces of carbonate of copper with one pound of carbonate of ammonia, pulverized, and dissolve the mixture in two quarts of hot water. When they are wholly dissolved, add the solution to enough water to make the whole quantity fifty gallons.

ANOTHER NEW ONION CULTURE.—We are making progress rapidly, indeed, and what a year ago was thought to be a new thing and decidedly valuable, may have to be cast aside for something still better next year. I have got on track of another new onion culture. Some time last winter a good friend in Pennsylvania told us that he had found the Extra Early Pearl, or "Bloomsdale Early Pearl" onion entirely hardy. About September 15th he plants seed thickly in rows and allows the young seedlings to remain in seed-bed all winter, to be transplanted in rows a foot apart and four inches apart in the row in early spring. The crop of large, white, wax onions, five inches or more across, is harvested in the fall. The land is then (October 1st) again planted with sets of the same variety, grown during the summer on the seed-bed where the seedlings had wintered. These sets are planted in rows one foot apart and three inches apart in the rows, and make onions fit for market in March. When the crop is taken off, the ground is ready again for seedlings raised during the winter months. This is a perfect system of close cropping. The seed-bed, during winter, raises a crop of

seedlings, and during the summer a crop of sets. The onion patch itself produces a crop of early bunch onions in March and a crop of perfect bulbs in autumn.

I had some doubts about the alleged hardness of the "Extra Early Pearl" onion. Indeed, I have grown a good crop of early bunch onions (Danvers) once in a cold location of western New York by sowing seed in August or September in open ground, and leaving the plants unprotected during winter. They happened to come out all right that time, but I was not so successful again in subsequent trials, and abandoned the practice. Undoubtedly this method will be found all right in a milder climate with almost any variety. But before becoming too enthusiastic over the "Extra Early Pearl" and its possibilities, we will have to try it in some of our test winters.

My friend, Mr. A. I. Root, reports, in *Gleanings in Bee Culture*, that sets planted last October have done splendidly and are making large bulbs. I only wonder, with him, however, that the introducers of the Early Pearl do not make more fuss over such an acquisition. It is yet time to plant seed for sets. Land need not be excessively rich, and seed should be sown thickly. Let us all try it; it may be a most valuable "new onion culture," and even far ahead of the one I have said so much about. Seed may be had of Johnson & Stokes, Philadelphia, D. Landreth & Sons, of same place, and perhaps of other dealers.

Mr. Joseph Harris does not seem to be much "struck" on my "New Onion Culture," and states, in *American Garden*, that the whole secret of success in onion growing is early planting. "Early planting," yes, there is the rub. Mr. Harris does not consider that in many localities at the North we jump out of winter right into summer. By the time we can get our land in shape for sowing seed, May is not very far off.

The method of growing seedlings under glass and transplanting in open ground, gives us all the time we want to prepare the ground as nice as we please, and adds two or three weeks to the growth of the young plants at the beginning of the season, which is the most important part. I have sown seed in open ground as early as I could get ground in order. I also set out seedlings according to the new way, and you should see the difference in the stand at present, even with the prolonged drouth, which injures the seed onions much less than the transplanted ones. And then how easily it is to keep the transplanted patch clean, while the other makes us get down on hands and knees to do the everlasting weeding. Of course, we can let the plants in the patch from seed stand thicker in the row, and thus grow a larger crop; but of this I will tell later on.

I have only one thing more to point out which Mr. Harris has overlooked. In New Jersey, where the early season is usually favorable, and seed can be sown in open ground in March, I still had trouble in getting the young plants started early enough so the heat of the May sun would not injure the young plantation. With the new onion culture the grower will have no difficulty in getting the crop well under way and out of danger in May. There are still other advantages of the new method, but I will forbear at present.

ONLY NOVELTIES.—Testing novelties is always a pleasure to me, although not usually profitable. Now and then I find a really good thing that I stick to and grow for many years, and have my enjoyment from it. On the other hand there are a great many things sent out that have some novel features and are "more curious than useful." These I also enjoy for a season, for I want to know what they look like. But when I have them one season, I think I have done my duty by them and want no more of them. To this class belongs the Tomato egg-plant, introduced as a great novelty three or four years ago; the Peach and New Zealand fig tomatoes, the mango melon or vegetable orange, although some people like them for preserves; the Chinese mustard, the melon shrub. (*Solanum guatemalense*), a most interesting perennial with unique and handsome fruit, but bearing only in so rare cases, and then only so few specimens, under ordinary treatment, that it is not worth while

bothering with, especially as you have to keep plants over winter in greenhouses or window, in order to propagate from them by cuttings or layers in early spring. Another much-advertised novelty, belonging to the same class, is the *Stachys tubifera* or *affinis*, recommended as a substitute for potatoes. The tubers are many in number, but small, and it would take a good deal of digging to get a bushel of them. So, as a substitute for potatoes they would not pay; as a curiosity, for one year, they might. If I wanted to take the time to go through a half dozen seed catalogues, I think I could name a number of such things that are interesting to grow for one year only. I confess, however, that tastes differ; many things that have no practical value for me are appreciated and used by many other folks. Thus, we never made use of Martynia, and only once or twice of the strawberry tomato, or Alkekengi, more recently introduced as "Barbadoes gooseberry." Yet thousands like the former for pickles and the latter for preserves. And so it is with a great many other vegetables. First of all we should plant those things that we desire to use for the table, and every gardener will make a different selection, according to individual tastes. Whoever feels inclined to test the novelties, may also do so, and try to get some comfort out of them; but the great majority of these novelties we will most likely plant once only.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

TWO GOOD POINTS.

One of our subscribers, D. L. Yad, of Iroquois county, Ill., sends us the following excellent suggestions:

"That the wounds made by taking off large limbs from trees should not only be painted or covered with grafting-wax, but should also be roofed in; that is, by covering with tin, zinc, or even with a shingle. This is a valuable thought for those who occasionally have to remove large limbs from some highly-prized tree. By means of this covering the wound is protected from the sun and rain and from fungus growths. Last season I covered the trunks of some young apple-trees that had been severely pruned with rosin-sized building-paper, and in the fall found the wound under the paper much better healed over than where exposed, with only grafting-wax for a covering."

His second suggestion is that in watering plants he finds it saves one half the water and prevents caking of the soil if a hole is made by the side of the plant and the water poured into it through a funnel.

HORTICULTURAL GLEANINGS.

GRAPE SPRAYING.

Spraying with insecticides and fungicides was among the important subjects before the Ohio Horticultural Society. These spraying remedies are preventive rather than curative; especially in regard to attacks of parasitic fungi, but experience and observation show that whenever and wherever they have been used intelligently, success has been decided and certain. An extensive grape grower from northern Ohio said that Eau celeste was used as a preventive of mildew and rot of grapes in the Lake Erie region, the average yield of sprayed vines being two and one half to three tons per acre. On unsprayed vines the yield never exceeded one ton.

THE SPRAYING MIXTURE USED

is one pound of sulphate of copper, dissolved in two or three gallons of hot water; when cold, add one pint of spirits of ammonia and dilute with twenty-two to twenty-five gallons of water. This preventive has been thoroughly tested by leaving check rows. The cost of the material used is less than \$2 per acre, and a man with one horse can spray from twelve to fifteen acres of vineyard in a day. Best success is attained where spraying is done early. A vineyardist at Kelly's Island delayed the application until mildew struck his vines, causing great loss. Another man sprayed part of his vineyard Saturday, completing the work the following Monday. In the meantime mildew struck the vines and fruit, making a difference in yield of the two parts of over one ton per acre, in favor of the earliest spraying. George M. High, of Bass Island, tried the Miller remedy on one acre of Catawbas.

It consists of two pounds of sulphate of iron, one pint of ammonia, added to twenty-five gallons of water. The acre thus treated produced 1,300 pounds of grapes; while vines immediately adjoining, treated with sulphate of copper (*Eau celeste*), yielded over two tons per acre.—*Orange Judd Farmer*.

Hardy Peaches—Time to Mow Bushes.

—H. E. L., North Middleboro, Mass. Early Crawford, Coolidge's Favorite and Oldmixon Free.—Bushes should be mowed the latter part of June or first of July. If cut then, before the roots have any food stored up in them, they will not sprout.

Replanting Old Orchards—Poultry in the Orchard.—J. M. W., Moulton, Iowa. I think you can safely replant apple-trees where apple-trees have died if you first renew the soil by adding to it plenty of finely-rotted manure.—It would be quite beneficial. The poultry would destroy many injurious insects, and their droppings would add to the fertility of the soil.

Gooseberry Free From Mildew.—J. H. N., Houghton, Wash. Of the newer kinds of gooseberries the Triumph is very promising, being a very heavy bearer of large fruit and free from mildew. The industry is not generally a heavy bearer, but is free from mildew and bears large fruit. In some localities it fruits enormously. Puyallup Mann Motle, lately sent out from Puyallup, Washington, is very promising.

Insects on Trees.—A. R. G., Last, Cal. You can destroy the insects that eat the leaves by poisoning the foliage with Paris green and water mixed in proportion of one pound of the poison to two hundred gallons of water. I doubt very much if the insects you refer to are gnats. If the insects can be syringed with kerosene emulsion they will be destroyed. The recipe for making this emulsion was recently given in these columns.

Coal Ashes for Fruit-Trees.—A. C. A., Keesville, N. Y. Coal ashes do not contain any material of value for plant foods. It is made up mostly of silica, of which there is already plenty in the soil. However, it is valuable on many soils, in that it may improve their physical condition. On heavy land it has a tendency to keep the soil loose and light, while it makes light land more retentive. They are most excellent as a mulch around currant-bushes and other fruit plants.

Mulberry Seed.—J. P. C., Pikeville, Tenn. The mulberries should be gathered as soon as fully ripe. They should then be spread on a rich seed-bed and be allowed to rot. When well rotted they should be lightly covered with fine soil. Another successful method is by rotting the fruit until the seed separates from the pulp, when they are dried and sown the following spring in the greenhouse or in the open ground. Most kinds of mulberries will grow quite readily from cuttings made in the fall.

Apple Borer.—T. M. E., Atkinson, Neb. The larva received is not of the same species as the beetle that made the holes in the twigs. These were made by the apple-twig borer. This borer is a small cylindrical beetle, from one fourth to one third of an inch in length, of a dark brown color above and black beneath. Almost nothing is known about the earlier stage of this beetle, but we know that the perfect beetle, both male and female, burrow into the twigs of apple, cherry and peach trees, hollowing out the centers. They start at some bud or small branch and work downward. They cause the twigs they work on to turn brown and drop off, or to break in the wind. They seem to make these burrows for protection and to obtain food. The only remedy suggested is that the bored twigs be searched out in June and July and burned. It is seldom that they cause much damage.

Suckers on Seedlings—Top-grafting Seedlings—Sun-scauld—Double-worked Tree—Heading Low—Bone Meal.—E. H., Lakeside, Cal., writes: "Are seedling apples and pears as liable to sucker as those that are grafted or budded?—Would there be any advantage in allowing the seedlings to form the trunks and then to top-graft?—Would the seedlings be as liable to sun-scauld as those that are grafted?—What is a double-worked tree?—Is it desirable to head chestnuts and walnuts low?—Is bone meal a desirable plant food or fertilizer for fruit-trees?"

REPLY:—Yes, if their roots are broken in any way. Root-grafted apples and pears seldom sucker much after the first year unless very heavily pruned.—No, for the seedlings are very generally more tender than the grafts, and it is better to have the trunks of the trees of the hardy variety, because they are exposed and have the more tender roots in the ground. Trees seldom kill in the roots from climatic changes, but often kill in the stem.—They would probably sun-scauld worse than the grafted kinds. Seedlings are not to be depended upon, as they vary greatly.—I can answer this best by an illustration: It is sometimes desired to grow the Beurre Bosc pear as a dwarf. It will not do well when grafted directly on the quince, but the Duchess d'Angouleme does better on the quince than it does on pear roots, and is for this reason generally grown as a dwarf. If, then, the Duchess d'Angouleme is grafted on the quince, and the Beurre Bosc is grafted on the Duchess d'Angouleme, the Beurre Bosc is said to be double-worked. This system is similarly followed with apples that do not do well on crab stocks. It is also done with them to get hardy trunks. It has been found in some severe climates that if seedling apple roots were grafted with Duchess of Oldenburgh and allowed to form a good trunk, and this trunk was then grafted with some half-hardy variety, that the latter did much better than when it was on its own trunk.—They should be headed low, but high enough to work around and under without inconvenience.—It is one of the best fertilizers known for fruit-trees. The finer it is, ground the quicker it is available.

EXTRACTS
FROM CORRESPONDENCE.

FROM TENNESSEE.—We have the healthiest part of the state, but strange to say, there are no movements towards developing the natural resources. Obed river runs through the county from east to west and is navigable for small steamboats four months out of every year. Wolf river, a tributary of Obed, runs along the Kentucky border for twenty miles and is considered the best water power in the state, as it is very rapid. One mile from Otto are the finest sulphur springs in the country. It is a settled fact that we have lead and zinc in abundance, and there are good indications of silver. There is so much iron in places that our county surveyor says the needle often fails to settle at any definite degree. The main reason this country has not been developed is that we have no railroads. However, I think the time not far off when we will be blessed with a good railroad. This is a fine country for fruit, especially small fruit. I have tried three varieties of raspberries and all have proved a success, and this spring I added four more. Grapes and strawberries do well, and I have never seen anything equal the Lucretia dewberry. J. O. G.
Otto, Pickett county, Tenn.

FROM OREGON.—This is the lower or north end of the Willamette valley, and is unlike the most of it in being very heavily timbered with white and red fir; gently rolling, with swamps or beaver-dam land situated along the rivulets in bodies of from one or two acres to one hundred. It will grow one hundred and twenty bushels of barley or oats per acre, and as much as eleven or twelve hundred bushels of onions, though from six to eight hundred bushels of the latter is an average. Wheat has been the leading export article of the valley since its settlement, but fruit is the coming industry. Prunes, plums, apples, pears, peaches, and all kinds of berries do well. One seed firm of Portland told me, not long since, that they had sold ten tons of peach seeds last fall and winter for planting. Timbered land can yet be bought at from \$25 to \$35 per acre; cleared land free of stumps, from \$50 to \$100 per acre; beaver-dam land from \$100 to \$200 per acre. There is some government land yet, but distant from market and generally rough. Timothy hay, \$16 per ton; wheat, \$1 per bushel; oats, 60 cents; potatoes, 30 to 40 cents. Our climate is excellent—winters mild and summers cool. We bid the industrious stranger a hearty welcome. Tualatin, Oregon. B. R. H.

FROM CALIFORNIA.—Some time ago I wrote you a short letter describing our country, climate, etc. On account of that letter, published in your paper, I have received fifty or more letters of inquiry. Now, I should like to answer them through your paper. I did not write that with the intention of encouraging immigration to this country, although I told nothing but the truth and could have said more; yet I would not want any one to come here on my say so without first investigating for themselves. Our government lands have to be irrigated to raise alfalfa, but for grain they do not. For fruit and vegetables we have to irrigate. I have lived here thirty-three years and have never known a total failure of crops, and we get good, fair prices for the same. Any man can make a living here if he works half the time. We have good water, plenty of timber, good schools and good society. Deeded land can be had for from eight to fifty dollars per acre. There are good farms in this vicinity close to school and church that can be had for from ten to twelve dollars per acre. These are what we call stock ranches and contain from one to four hundred acres. A man can buy and pay part and have time on the balance. Some of our government land would make good homes, and is not far from school, town and other conveniences. J. B. R.
Janesville, Cal.

FROM LOUISIANA.—In your issue of May 15th, I saw a question by Mrs. J. H. C., in regard to celery growing in Louisiana, which was only partially answered by "Joseph." In southern Louisiana we plant our celery seed for the last crop in July and August. When the plants are six inches high, they are transplanted to trenches four inches deep and nine inches wide, well enriched with rotted cow manure. The trenches are two feet and one half apart, and the plants eight inches apart in trench. During very hot weather the plants should be sheltered from the sun by cotton cloth or palm-leaf leaves. They should be well watered with soap-suds and liquid manure. When tall enough, the celery should be earthed up to blanch for table use. Here in southern Louisiana we have one of the most delightful corners of the earth for truck farming and horticultural purposes. Figs, pears, peaches, plums, apricots and grapes do well, and in the parishes around and below New Orleans, the finest oranges in the world are raised. In Livingston, Tangipahoa and the other so-called Florida parishes, large land-owners are giving land rent free for a long term of years to people from the North who will settle here. All kinds of fruits, vegetables, perfume-bearing flowers and nut-trees can be grown on

this land. The men who make these offers are among the most reliable in the state. Among others is E. L. St. Ceran, of the American Horticultural Society, who has the beautiful experiment farm within a mile and one half of Ponchatoula and four miles from Hammond, Louisiana, where he has many kinds of the Labrusca and Hestavalis varieties of grapes in bearing this year, besides a fine young orchard of white Adriatic figs, and other trees and vines too numerous to mention in a short article like this. Wishing you success and many, many more subscribers to your good paper, I am yours truly. J. A. T.
Ponchatoula, La.

FROM CALIFORNIA.—Last winter was not so severe in this valley as the previous winter, yet we had plenty of snow and rain and are not in danger of drought this summer. Everyone expects an abundant hay crop. The sale of butter is dull at present. Our nearest market places are Reno, Virginia City, Truckee and Sierra City. Extra quality brings 22 cents per pound; poor quality from 15 to 20 cents per pound. Eggs are cheap, selling from 15 to 20 cents per dozen. Some of the farmers are buying separators and creamers for making butter. Some of the farmers make cheese which sells for 16 and 20 cents per pound. Artesian well-borers were introduced into this valley in 1884 and 1885. Most of the farmers have one or more artesian wells; there are over two hundred in the valley. During the past dry seasons they have proven a great help, both for irrigating purposes and for furnishing water for cattle. The deepest well is 1,132 feet and flows 20 gallons a minute. The largest well flows 120 or 140 gallons a minute, and is 400 feet deep. There are three saw-mills in the valley or on its borders. There is no railway, although a track was partly laid through the valley some years ago, but the company failed. Doubtless another one will some future day be built. Every autumn we have a Grange Fair, gotten up by Plumas Grange, and another fair gotten up by an agricultural association. The land is fast being taken up and there is very little vacant land left. A. W.
Sierra Valley, Cal.

FROM ILLINOIS.—St. Clair county, situated in the very heart of the Mississippi valley, well known for its black, fertile soil, offers inducements that cannot be beaten by any county in any state in the Union. This is a great wheat country, averaging some years as high as thirty-five bushels per acre. Corn averaging seventy-five bushels per acre is considered nothing unusual. Hay, both clover and timothy, turns off well. As to potatoes, well, they just fairly roll out; but last year the crops were a partial failure, owing to drought, and potatoes this spring advanced from the usual price, fifty cents per bushel, to one dollar for small, one dollar and a half for larger, and two dollars for choice. This is a great fruit region and when last year fruit at almost all other places was a failure, we shipped heavily, besides, having plenty for home consumption. Land sells at from thirty to one hundred dollars per acre, owing to location, fertility, etc. To a man who has a moderate amount of money to invest in farm land, I would say, don't invest until you have investigated this part of Illinois. A man without capital may in time become rich (many have), but he must come prepared to work. Coal is plentiful, selling at four cents per bushel at the mine; nut coal at three cents. Belleville and East St. Louis, each containing over fifteen thousand inhabitants, furnish a market for all farm produce. East St. Louis contains the National stock-yards, which excel those of Kansas City, and is the terminus of eighteen railroads. Land is steadily advancing in price. To all who want a good home I would say, come now. H. E. D.
Millstadt, Ill.

OF INTEREST TO BUTTER MAKERS.

The gold medal for the best butter at the Paris World's Exposition was awarded to Moulton Brothers, of West Randolph, Vt. In making this butter Wells, Richardson & Co.'s Improved Butter Color was used. This award has largely increased the sale of the Improved Butter Color, for every progressive dairyman wants to use the best. Don't let your dealer sell you other kinds on which he makes a larger profit.

No dairyman can afford to be without it, for it is unequalled in strength and natural June color. Send three 2ct. stamps to Wells, Richardson & Co., Burlington, Vt., for postage and packing of a sample bottle (to color 60 pounds), and see for yourselves how far ahead it is of ordinary butter color. If you never colored your butter, this article will increase its value several cents a pound.

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FROM SOUTH DAKOTA.—So much has been said and written about this country that it seems almost futile for a poor ranchman to attempt to enumerate the merits or demerits of the Black Hills, which probably contain more resources than any other portion of this broad domain. Whatever a person's calling or occupation, he is almost sure to find here a broad field in which to operate. If he is a miner, he can prospect for himself, or find ready employment at good wages with almost any of the great corporations which are just beginning to develop this wonderful region. If he is a stock-raiser, or desires to follow that avocation, no greener pastures or more nutritious grasses can be found anywhere. Experienced cattlemen say that on an average a three or four-year-old steer, worth thirty or forty dollars in the Chicago market, can be raised and put in good shipping condition at a total cost of about three dollars. Truck farming can and is being carried on with success by large numbers who find a ready market in the mining camps. Saw-mills give employment to large numbers. Stucco and marble quarries are just beginning to be worked. Fire and brick clay is found in great abundance, and many predict that much of our pottery will, in the near future, be made here in the Hills. Slate and mica are found so plentifully as to attract little attention. The tin mines, just beginning to be developed, will soon give employment to many thousands of laborers. Placer mining has become a thing of the past and miners must now go to bed-rock to develop their lodes, and I might add that placer farming and placer farmers must soon follow in their wake. Much of the odium that has been cast upon our state for several years past on account of partial or total failure of crops, is due to placer farming. People with little or no experience in agriculture come

West, locate a claim, break a few acres, put in seeds in a slipshod manner, half fence their land and then go away to prospect, hunt or work in the mines, expecting on their return to their ranch at harvest time to find a bountiful crop, without having given its growth any care or oversight. The same method has been followed to some extent in stock-raising. A man would buy fifteen or fifty head of stock, according to his means, turn them on the range and give them no further oversight, except at the semi-annual round-up. That strict attention to stock-raising is very profitable, is amply verified by David Clark, who died here recently, worth \$100,000, at the age of thirty-seven, all made in the stock business, without capital to begin with. What we need here is less men to advocate the sub-treasury scheme and more thorough, painstaking, practical farmers and stockmen who are willing to possess their souls in patience until, with strict attention to business, they can aid in building up a country offering the grandest opportunities to willing workers. Why so many will toil and struggle in the great cities for a bare subsistence when they could readily obtain the horn of plenty here, is an unsolvable problem. Along the eastern verge of the Black Hills, traversed by the Chicago and North-western railway, which is doing a wonderful work in developing this country, is found fertile land available for settlement in sufficient quantities to afford prosperous homes and happy firesides for the surplus population of the greatest of our cities. Why cannot some of our philanthropists take up this matter and thereby solve one of the most momentous social and economical questions of our times? If such a thing were done, however, it might be necessary to have some supervisory management to teach all the arts of agriculture. J. H. W.
Rapid City, S. D.

Are Your Chickens Healthy

Or, are they dying with gapes? Are they drooping and ailing? Have they diarrhoea, or chicken cholera? Are they troubled with leg weakness? Would you have them bright and chipper as larks? The April number of that most practical of all the poultry papers, FARM-POULTRY, contains some special articles upon the care of young chickens—How to rear, keep them healthy and prevent the diseases so common to them. Send for that copy, price 5 cents. One year's subscription to FARM-POULTRY will furnish you more information about raising all kinds of poultry than any one dollar book or paper. If you mention this paper we will send FARM-POULTRY on trial six months for only 25 cents in stamps; or one year for 40 cents. Special Offers sent free. I. S. JOHNSON & CO., Box D, Boston, Mass.

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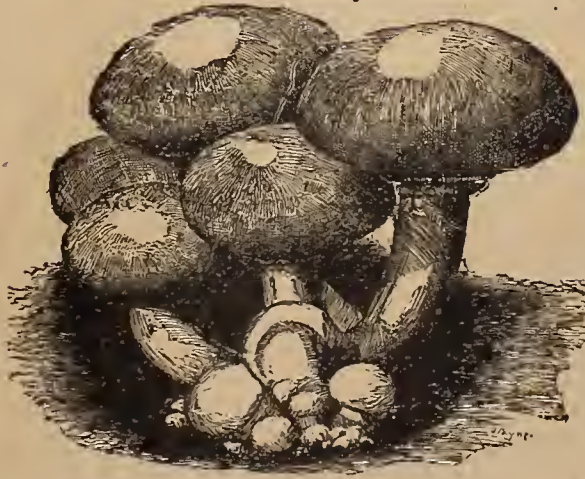
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MUSHROOMS: HOW TO GROW THEM!

By WM. FALCONER.



For home use fresh mushrooms are a delicious, highly nutritious and wholesome delicacy; and for market they are less bulky than eggs, and, when properly handled, no crop is more remunerative. Any one who has an ordinary house cellar, woodshed or barn can grow mushrooms. This is the most practical work on the subject ever written, and the only book on growing mushrooms ever published in America.

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OLD THINGS AND DEAR.

There is no song like an old song
That we have not heard for years;
Each simple note appears to throng
With shapes that swim in tears.
It may have been a cheerful strain,
But 'twas so long ago
That glee, grown old, has turned to pain,
And mirth has turned to woe.

There is no friend like an old friend,
Whose life-path mates our own,
Whose dawn and noon, whose even and end
Have known that we have known.
It may be when we read his face
We note a trace of care;
'Tis well that friends in life's last grace
Share sighs as smiles they share.

There is no love like an old love,
A lost, may be, or dead,
Whose place, since she has gone above,
No other fills instead;
It is not we'll ne'er love anew,
For life were dearer if so,
But that first love has roots that
Where others cannot grow.

—Selected.

SPYLLARD'S DAY-BOOK.

BY ELLA GUERNSEY.

RIVERSIDE FARM, WILDWOOD, KY.,
September 14, 1891.



GRANDSIRE HEUSTIS, who is Boston bred and college learned, hath instructed me in the arts of reading and writing, and made for me some small books of a brownish paper—one for each month of the year. He hath also

trimmed for me several good pens, from quills plucked from the wing of our most majestic-appearing gander, and squeezed from poke-berries one pint of crimson ink.

Methinks the events in our tame, work-a-day lives are not worth the noting, but grandsire insists that I shall keep a day-book. Father and mother, with brothers Adam and Bein, are ill pleased that grandsire fills my head with notions, calling us a moon-struck pair.

Mother bade me to-day to try with might and courage to lay aside my fantastic ways and grow up into a daughter they may speak of with parental pride.

It seems that father hath spoken harshly to grandsire, reproving him for teaching me Latin and permitting me to use his books. Father saith it is not right or natural that maydes should desire to become learned women, and is heartily ashamed that I, Spyllard Heustis, sixteen years of age, am bidding fair to grow up an idle jade, or 'wise frump,' instead of a womanly, sweet woman.

Mother saith women need little book learning, and I grieve her sorely by so often forgetting to spin my stent, caring nothing for housewifery arts if I may read with grandsire.

Perverse mayde that I am! I weep bitter tears over my weakness, which hath caused all the members of this household, save grandsire, to look with ill favor upon my waste of precious time.

Thys day doth find us comfortable in our new house of logs well chynked and daubed, two large rooms, with stone flooring. Upon the north side we look out upon the Ohio river, a beautiful body of water. Grandsire doth pine for the old Boston home, but I love this Kentucky wilderness, though we have had trying tymes in our fight for subsistence.

Hark! Sister Civilly bids me come to my wheel, which hath stood idle for the last hour.

September 16.—Sister Civilly and Orilly are anxious about their best gowns, having decided upon inch-wide cheeks in madder red, with indigo blue. Mother gives them time to work for themselves after six in the afternoon. Now they spin half of the night and have nearly the yarn needed for the weaving of their gowns. On yesterday Civilly spun thirty cuts—good, honest ones. Father was proud to tell of it to neighbor Stowe, who boasted yesterday that his Serena had spun twenty-seven. We are proud of sister Civilly, who is fair to look upon and not given to multiplying words to no purpose, while few can excel her in womanly industries.

Orilly tells me two pieces of welcome news. Father hath taunted several hides, and in three weeks the shoemaker will be here and not leave until we have each one of us a pair of real shoes. Last year we did not get shoes until the New Year, and often our feet were sharply nipped by the cold.

Then we are to have a feast, and the girls are now preserving wild plums, berries and grapes. Mother saith we shall have pumpkin saace, and is saving raccoon and bear fat to shorten the flour cake father hath promised us. He hath harvested twenty bushels of wheat, and will carry it twenty miles to the crusher; then mother will bolt it through her gauze neckerchief. For two years we have not tasted flour cake.

Hark! Mother calls me to my wheel. Again I have neglected my spinning and must make up for it.

September 20.—Mother commends me to-night, and tells me father is pleased that I have not once peeped into grandsire's books, spun my stent twenty cuts and said our dreaming Spyllard may come to something yet. Father worries about our future because we are girls. For the boys he hath no fear of failure or suffering should calamity assail us.

To-night the fire burns brightly in the kitchen fire-place. In her corner, mother sits picking wool. Sisters Orilly and Civilly are reeling yarn, late as it is, and the boys are talking over the feast we are to give in two weeks. Adam and Bein think they can slay a deer for the occasion.

Grandsire read to-night of the flood and the rain which lasted forty days and nights. It made me feel queerly as I listened to his reading and the steady downpour of the rain upon our clapboard roof. The river looks harmless enough, but our house is built upon low ground. What if the waters should leave their rightful bounds!

Mother saith a young maid should be in bed before nine. I will get out my trundle-bed. The wolves come closer to the house than usual and howl most dolefully.

September 27.—And still it rains steadily. Grandsire begs father to move everything upon higher ground, but father thinks there is no danger of a flood, as the river bank is steep.

Last night, as the big clock struck eleven, seven tall Indians lifted our latch and came inside silently, their blankets being dripping wet. I was sore afraid. In imagination I felt the tomahawk, they looked so black and sullen; but after rummaging about for food, they lay down before the fire. I could not sleep, being afraid, and the odor from their steaming blankets was offensive.

September 29.—Ah, me! The river *did* leave its banks last night. Before we slept it was rising fast. Even merry Civilly kept silence while she turned the little wheel, and grandsire prayed for help in time of trouble. I crept into my trundle-bed with a fear in my heart. Twice before midnight I sought grandsire, asking if we had not better wake father; but he bade me give to the winds my fears.

Suddenly a terrible roaring alarmed me, and on looking out I saw the lapping, lashing, choppy waters creeping in at our door, and then I cried aloud our danger.

"For once, Spyllard, your timorousness hath done us good service. Had we lain much longer we should have been lost," said father, as we waded out into the cold water, groping our way blindly, trying to find, in the black darkness, the way up the hillside. Upon the hill we found half a dozen families gathered, driven out by the flood, and have camped out in company. Our poultry, sheep and harvests have been swept away. Neighbors Beck and Stowe, whose homes are not disturbed, have come to our aid, but we suffer from cold and hunger.

Father was augered when he saw that I had saved from the flood my day-book, ink and pens. Several Indians have joined us, bringing in corn and meat.

October 9.—The waters have gone down. Our house was not washed away, but a thick coating of mud hath nearly spoiled every article in it.

Down the river myriads of pumpkins float; these the boys fish out, and for days we have subsisted upon boiled pumpkin and wild game without salt. Yesterday Civilly wept, saying instead of a feast we should have a famine, as the river hath destroyed harvests so generally.

Uncle Stowe, one of neighbor Beck's serving men, brought us a pot of lye hominy and bade me keep in mind, "He will not forget his own." Grandsire does not seem cast down.

October 20.—We are still subsisting upon boiled pumpkins. Mother hath boiled down several gallons of pumpkin molasses, which neighbor Beck will exchange corn for.

Civilly and Orilly have sold, for fifteen bushels of corn, to Mrs. Stowe, their new flannel gowns, and mother wants to sell, in Louisville, her scarlet pelisse for anything eatable.

Father is making for the family, buckskin moccasins, as the hides intended for our shoes were swept away.

Mother smiled on me to-day and called me her dear, obedient Spyllard, as for three weeks I have not looked inside grandsire's books, and have not lagged with my work. I am happy that I have obeyed, though the lounging hath been almost overpowering to spend time with them. Oh that I might be as other young maids!

October 27.—I, Spyllard Heustis, am so wretched, and mother's tears fall fast because father and grandsire have had high words on my account. Grandsire received meekly the angry slap father gave his poor, old, thin face, and crept away to his bed. As soon as I dared I went to him and kissed the purple spot, bathing it with my tears. He drew me down to him and said, oh, so gently:

"My good Spyllard, we will hide away these troublesome books and forget all the past. They would have you grow into a buxom, capable lass. A good daughter will obey."

October 28.—Father hath told me plainly that he hath lost all patience with grandsire and me. He feels keenly that the neighbors are speaking of me as that queer, half daft Spyllard, and tell strange tales of my oddness.

Father saith I am wrong in many ways; that my time is not yet my own, and I am dishonest and selfish in eating bread earned by hard-working mother and sisters Civilly and Orilly, who are at present the only ones

earning anything. He thinks it sinful that I desire to go against nature, and am not content to fill woman's place. He bade me tell him what use I shall ever find for my knowledge of mathematics and Latin. If I had been a boy things would be different. For girls, too much knowledge is hurtful.

Then grandsire said:

"Son, our Spyllard may one day—"

"Silence!" thundered father, or I shall one day forget you are my father. I say Spyllard shall give up her fantastic notions and earn her own bread or leave this house. Starvation stares us in the face. Even her puny shoulder must be put to the wheel."

Father need say no more.

November 4.—Uncles Stowe and Whitehead are here for the night. They are Mr. Beck's faithful black servants, who have gathered together twenty bushels of wheat and will take it to Louisville, thirty miles away, in a boat. When they have brought back the flour we shall have the flour-cake baked and neighborhood feast. Uncle Whitehead has killed a bear and Adam a deer.

Around the hearth they are all gathered, watching Uncle Stowe fashion a hunting-shirt from buckskin for brother Bein.

Uncle Whitehead has just told us he saw, a year ago, Mr. Beck measure out for the son who went to York state, a half-peck measure even full of silver dollars. He must be prodigiously rich, yet people call him stingy.

I am glad the house is so well guarded, as on last night more Indians came in, and two of them turned upon father as he slept, looks of hatred which made me tremble. Then close beside the head of my bed the water has washed out quite a hole in the daubing between the logs. Twice in the night a bear or some wild creature ran its tongue through this hole, snuffing in a savage manner, which greatly alarmed me, though I dared not call, because the Indians were here.

November 10.—Uncles Stowe and Whitehead have not yet come, though they have been gone six days. All this day an anxious and hungry crowd have watched at the landing for their coming. When one has sustained life for days on pumpkin and unsalted meat, with occasionally a hoe cake, hunger makes them ravenous. I am spinning over hours for Mrs. Beck, and mean to take only a taste of flour cake, that some hungrier soul may have my portion.

Grandsire has seemed so lost without his books that I whispered to him last evening that he must get them out, as I will surely keep my promise to father.

November 13.—Uncles Stowe and Whitehead returned early this morning with the flour, which mother hath bolted. Twenty people were at the landing to help carry to our house the meal, flour and salt and a pound of store tea. By noon forty people had collected in the yard, where a deer and three wild turkeys were roasting. In the kitchen, Aunt Vilet and Rose Stowe mixed the flour cake, which was quickly baked in skillets over the coals.

Mrs. Beck has a beautiful new calico gown, six pence a yard, a dark brown ground, thickly sprinkled with bunches of ripe, scarlet currants.

I was too happy to eat even the delicious flour cake, as Uncle Stowe, who is thought well of in Louisville, brought the glad news that grandsire has been selected as a teacher by some gentlemen who will have none but a college graduate to teach their young folk.

Grandsire and father had a long conference, and I saw tears in the eyes of both. Then mother beckoned to me and asked if I would like to go to Louisville and keep house for grandsire and teach the young children their letters.

In my joy I danced gleefully until father sadly said:

"So our little Spyllard is glad to leave father and mother?"

"No, not that, father," I cried, forgetting time and place and flinging my arms about his neck; "but 'tis happiness to help grandsire if I can do it with your blessing. Shall you feel ashamed that I cannot be a good spinner? Indeed, I have tried to be your good, industrious little maid."

Father's voice was husky as he put me away from him, saying:

"We cannot all be hewers of wood, as I've only lately come to see. If I've been hard with my old father and my Spyllard because they chose a different path from the one I would have them take, I am sorry. There will not be, when the deep snows fall, bread sufficient for each one. Some of us must go from home for a time. It is grievously hard that it must be the least able to go, while I, strong and well, must permit it."

"Father feels distressed that grandsire, in his old age, must go to work, and that our youngest born must go among strangers," whispered mother, drawing me away.

As the place is a good one, and only a capable man can fill it, grandsire has been made much of. And as I stood watching the tea drinkers gathered about the big iron kettle where the whole pound was steeping, I heard the words:

"So that idle young maid, whom we thought lacking in sense, will really be a little help to the family. She is only fit to potter around with books, not being brisk motioned as young maids should be. It's a blessing that two burdens will be taken from the Heustis family before winter sets in, as neither grandsire nor Spyllard earned their salt. I've heard that the lame and lazy are always provided for."

At sunset every guest was gone, and I have stolen down to the riverside to write.

November 15.—Sisters Civilly and Orilly have generously given to me every article of clothing that could possibly be spared, and I am to repay them with the very first money grandsire pays me. He thinks that little by little we shall induce the patrons of his school to look with favor upon a female teacher for the very young children, and mayhap some day I may be chosen for my own excellence, instead of being tolerated because I am the master's granddaughter.

Grandsire thinks women may make of themselves the very best teachers, but there are few to agree with him, saying woman's mental power doth unfit her for severe mental work.

November 29, Louisville, Ky.—Grandsire and I are settled in our new home—two pleasant rooms in the school building. It is four days since we were rowed down the river by Uncles Stowe and Whitehead. At the outset I was not quite sure that I could grow used to the noise about me. Some plain furniture has been loaned us, and an abundance of fuel is supplied us. Grandsire finds that he can allow me six dollars every month, and every cent of it shall be sent home.

Uncle Stowe has shown me about the town and pointed out some handsome houses of brick. He says I shall soon lose my awkward, bashful manners, and grandsire looks the gentleman in any place. Yesterday my heart swelled with pride when I saw him receiving with dignity half a dozen of his wealthy patrons.

Ah, my heart is brimming with joy, now that father and mother are no longer ashamed of their little maid; and a queen isn't happier on her throne than I am after the day's duties are done, when I lean my head upon grandsire's shoulder, listening to his counsel. He shows me that one may work with hands or head, but there must be heart with either one to make it acceptable.

When I whispered to him that I was no longer sorry that I am only a young maid, he said:

"Maids may grow into sweet and gracious womanhood, such as Deborah, Dorcas, Lydia, and Miriam."

January 29, 1892.—Grandsire and I are very busy. I have a class of young children who seem to love me dearly. He thinks me a born teacher. But, best of all, father is pleased with me. He spent the past week with us, leaving for home this morning. Civilly will remain with us, having spinning engaged at a fair price to busy her for weeks to come.

Father said they missed sorely their good Spyllard, but thanks were duly given to grandsire and me that there was bread in our house this cruel winter. Good-night.

HOW MABEL TOOK CARE OF THEM.

WHEN the train moved away from the station, Mabel pulled out her little red-bordered handkerchief and cried. There, in the car window, was Fay, her dearest friend, moving farther away from her each minute. For awhile she could see Fay's hand and handkerchief moving from the window, but when they had passed out of sight Mabel sobbed aloud. Right by her side stood Fay's mamma. She, too, stood watching the little, white signal till it was lost in the distance. Then she turned and held out her hand to Mabel.

"Come, Mabel," she said, in a voice that trembled somewhat, "let us go home now."

"As they walked away together, sympathetic eyes of the by-standers followed them. One soft-hearted baggage-man shook his head sadly.

"Hard, isn't it?" he said.

The man standing next him nodded.

"And it seems only the other day they were married!" he answered. "How proud and happy they were! What was the trouble, do you know?"

"No," said the other, with a wrinkle of the eyebrows. "Some nonsense, I guess. Ralph always was a quick-tempered fellow, and she was an only child, you know. I never thought they'd separate, though—and such a sweet little girl!"

His companion smiled a little.

"Did you notice the other one?" he asked. "That's Colburn's young one. Fay and she are as thick as peas. It'll be very lonesome for Mabel, now."

Mabel was already lonesome as she walked away from the station with Fay's mamma. When she looked up, however, and saw the tears in Mrs. Fenwick's eyes, she winked very hard to keep back her own tears. She did not know that the reason Fay had been sent away was that Mr. and Mrs. Fenwick had separated now, but she felt very sorry for the parents.

FOR SCROFULA

and for
the cure of all
scrofulous diseases,
the best
remedy is

Ayer's Sarsaparilla
Cures others, will cure you

left behind, and had promised Fay to take good care of them.

"I do not think my mamma is happy," Fay had confided to her, "for she cries a great deal. I am very sorry to go away just now, only Aunt Lottie wants me so much. And papa is not very well, I think. Sometimes he is cross, and things are all different from what they used to be. You must be good to them, Mabel, so they will not be too lonesome for me;" and Mabel had promised that she would. Now she took Mrs. Fenwick's hand as she trudged along by her side.

"I will be your little girl till Fay comes back," she said. The sad face smiled a little as Mrs. Fenwick looked down at the child thoughtfully.

"Thank you, dear," she said.

Mabel's active little brain had already devised a plan.

"Every morning on my way to school I will stop and see you," she said, after a minute, "and—let me see—every afternoon when I don't have too many lessons, and when my teacher does not keep me after school, I will stop in the store to see papa."

"Papa!" cried Mrs. Fenwick.

She had hardly listened to the child, but started then, for Mabel's papa, poor young Jack Colburn, had died some years ago.

Mabel laughed merrily.

"If I am your little girl," she said quickly, "then Fay's papa is mine."

Mrs. Fenwick flushed a little.

Mabel talked on without stopping.

"Sometimes we went into his store coming home from school," she continued, "and I know just where to find him—down in the little office at the end, sitting on a high stool, and the man outside always smiles at us just as pleasant, and says:

"Step right in little ladies."

Mrs. Fenwick choked a little. How many times had she been in that little office herself—but now she would not go any more.

That evening she was all alone. No tired husband came home to tea, and Fay was far away with Aunt Lottie. Some of the neighbors thought of the lonesome little mother, but none ventured to intrude upon her in her sorrow.

In the morning Mabel came in as Mrs. Fenwick was eating her breakfast. This was an every-day occurrence when Fay was at home, for the two children walked to school together.

"Good-morning," said Mabel, smiling.

"Good-morning," said Mrs. Fenwick. "Come here and kiss me."

The little girl did so and rubbed her own chubby cheek against Mrs. Fenwick's.

"I wish I could stay with you," she said, sadly, "but I don't want to be late at school. It's very lonesome without Fay, isn't it?"

"Yes," answered Fay's mother, her eyes filling with tears.

Mabel walked around the room in silence.

"On my way back from school," she said, finally, "I'll go in and see Fay's papa."

"You are very thoughtful," observed Mrs. Fenwick.

Mabel laughed.

"I am taking care of you two till Fay comes back," she answered.

Then she picked up her lesson books and kissed Mrs. Fenwick good-by.

"Take good care of yourself till I come back," she said.

Mrs. Fenwick stood at the window watching the little figure go down the street. She would turn around every minute and throw a kiss at the window, as Fay used to do.

School was very lonesome for Mabel. Usually Fay sat by her side, and at noon they ate their lunch together under one of the big trees in the school-yard. Some of the other children came up to Mabel now, but she turned away from them all with a little sigh. Had she not promised Fay that she would be true to her and take no other girl in her place? At noon she put her little lunch-basket on the desk before her and ate alone.

The afternoon seemed very long, but when school was dismissed at last, Mabel was the first to leave the building. Up the street she ran, around the corner by the green lamp-post, and never stopped till she reached the hardware store, where Mr. Fenwick had his little office at the end. As she pulled back the heavy door and stepped inside, one of the hardware men who had a black streak across his forehead, smiled at her from over the counter and asked:

"What do you want, little girl?"

Mabel smiled, too, as she walked past him.

"I'm going in to see Mr. Fenwick," she answered.

The man who had only recently come into the store tried to stop her. She only laughed in answer.

"Oh, he will see me," she said, and pushed open the office door.

Mr. Fenwick turned around at the sound. There he sat on the same high stool with his books open before him, but there were great rings under his brown eyes, and Mabel thought he looked tired. As his eyes fell upon the little intruder Fenwick started.

"Hello, Mabel," he said.

She walked up beside his high chair and looked up at him smiling.

"How do you do?" she asked, cheerfully.

"How are you getting along?"

Mr. Fenwick smiled.

"Who sent you here?" he asked.

Mabel drew her little form up proudly.

"Nobody sent me. I thought you might be lonesome without Fay."

"So I am," cried Fenwick, getting down from his stool and lifting the little girl in his arms. "So you came in to keep me from being lonesome, did you?"

"Yes," said Mabel, moving her soft hand over his dark hair. "I am to be your little girl while Fay is away. Do you think that she will be gone long?"

Fenwick hesitated. He did not care to tell Mabel that Fay would not come back till it had been legally decided which parent should have charge of her.

"It's very pleasant where she is," he said finally. "I shouldn't wonder if she didn't come back right away."

Mabel brushed away a tear.

"It's very hard on me," she said, "but I suppose it's hard, too, on you and—" She was going to say "on mamma," but thinking he might not understand, finished, "and on your wife."

"Yes, it is."

"We'll have to all keep each other from being lonesome," Mabel said, as Fenwick at last placed her on one of the stools by his side.

For some time the clerks in the hardware store cast frequent glances through the glass door at their employer in his office and the little girl at his side.

"It's Colburn's girl," said one of them; "she used to come in here with Fay Fenwick. I guess it makes Fenwick feel bad."

When Mabel came out of the office they all smiled at her. She spoke to Mr. Fenwick as she closed the glass door.

"I will try and come to-morrow," she said; "take good care of yourself."

"All right," answered Fenwick, smiling; "thank you."

He sat for some time after she left him with his head on his arm, so only the dark locks were seen through the door. The men outside felt very sorry for him.

"It's too bad," they said; "and they were so happy together."

When Mabel reached home she told her mamma what she had done. Mrs. Colburn kissed her and said:

"All right, darling."

She thought it could do no harm, and possibly the child might comfort them a little. So every morning Mabel called on the forlorn little mother, who grew thinner and paler each day; every afternoon a second stool was placed beside Mr. Fenwick for his little visitor. The hardware men looked forward to her calls with pleasure. One gave her a pencil once, with a big rubber on the end which left a black mark after it every time she used it. But Mabel always smiled on the poor fellow because he did not know about the rubber, probably.

One afternoon she came into the store in a hurry and ran into Mr. Fenwick's office all out of breath.

"What is the matter?" he asked.

She held up a little three-cornered envelope. It was tinted pink, and on the back was a picture of a tiny white dove with a letter tied around its neck.

"See!" cried Mabel; "here is my letter from Fay!"

Fenwick took it eagerly. It was Aunt Lottie's handwriting on the outside, but when he took out the small, pink sheet, his heart throbbed, for he knew his little girl had penned it.

"Read it," said Mabel.

It was written well for a girl of ten, and had cost Fay much time and trouble. It read:

DEAR MABEL:—It is a very nice place here. Aunt Lottie is very good. The conductor was also very good. I hope you don't eat dinner with Annie Dobson. How are my dear papa and mamma? I want to see them and you very much. I think I will come home before long. Write soon to your very affectionate FAY FENWICK.

Fenwick put the paper back in the envelope and kissed it.

"When you answer this," he said to Mabel, "tell Fay that papa kissed her letter."

"Somebody told you," she said; "Fay's mamma kissed it, too."

Fenwick colored.

"Did she see it, too?"

"Why, yes, when I went to school this morning, you know."

"Does she know you come here?"

Mabel laughed again.

"Why yes," she said.

"Is she very lonesome?"

"You both ask me the same questions. When I go to see my new mamma she says: 'Do you think Fay's papa is very lonesome?'"

"Is that so?"

Mabel nodded.

"I am going to see her now," she said, after a minute.

"Who?" asked Fenwick.

"Who have we been talking about?" said Mabel, smiling; my new mamma. She had a headache this morning, and I thought I'd go twice to-day."

"That's right," said the new mamma's husband. "Was she very ill?"

"I think so."

Ralph Fenwick ran his fingers through his dark locks.

"Suppose you send her something by me?" said Mabel.

"What!" cried Fenwick.

Mabel nodded.

"Don't you remember when Fay and I took the tin candlestick, and how pleased she was?"

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Fenwick walked around the office.

"I remember," said he.

"You might send her a pair of scissors, only that isn't a good sign—something awful might happen."

"Oh, well, then, I won't send them," said he, with a faint smile.

"I suppose flowers are what the sick should always have, but you don't have flowers in your store," said Mabel.

Fenwick paused in his walk. A red spot burned on each cheek.

"You wait here and I'll be back in a minute," said he.

He took his hat from behind the door and went out of the store. Presently he returned with a little bunch of violets in his hand.

"Here are your flowers," said he, holding them out to her. "Give them to her if you want to."

Mabel reached for them with a little scream of delight.

"Violets!" she said. "And I know a nice little verse to say when I give them to her. Wouldn't that be nice?"

"Very nice," said Fenwick.

Mabel ran away joyfully. She could hardly wait now. Every little while she lifted the flowers and smelled them.

"They are different from our little violets," she thought—"bigger, with more leaves, and they smell more."

She saw Mrs. Fenwick in the window as she neared the house, and ran in without knocking.

"See what I've brought!" she cried, holding out the bouquet.

"English violets!" said Mrs. Fenwick.

She raised them to her nostrils. English violets had tender associations for her.

"They are yours," said Mabel, putting her hands behind her. "Fay's papa sent them, and he said he thought it would be very nice to say this verse with them:

The rose is red,
The violet blue,
Do you love me
As I love you?"

Mrs. Fenwick did not move her head. The color slowly mounted to her forehead. Then she raised the flowers to her lips and kissed them.

"I thought you'd like 'em," said Mabel. Then, noticing that the tears were running down Mrs. Fenwick's cheeks, she ran and threw her arms around her. "Don't cry; don't, please don't," she said, entreatingly.

Mrs. Fenwick drew the little face down to hers and kissed it.

"Did he really send them?" she asked.

"Of course," said Mabel.

Mrs. Fenwick was silent a minute. Then she detached one of the violets from the others.

"Mabel, are you very tired?" she asked.

Mabel looked out of the window.

"Not so very," she answered.

"And will you do something for me?"

"Of course I will," said the child, smiling.

"Then take this back to your new papa and tell him I sent it."

"Only one?"

"One is enough," said Mrs. Fenwick, smiling through her tears.

Her mind went back to the time when she first sent Ralph a violet, a token of her love for him. After the child had gone she went to the door and watched her down the street. Her heart throbbed loudly, but she kept the fragrant violets clasped in her hands.

Mr. Fenwick had not been himself since Mabel had departed. The books lay open before him, but he paid no attention to them. He had hardly stirred when Mabel returned. She was very tired, but held out the flower to him with a smile.

"I wish it was more than one," she said, a trifle ashamed of the gift she was bringing, "but she said one would be enough."

Mr. Fenwick's heart gave a bound.

"Who did?" he cried, and almost choked in asking the question.

"My new mamma," answered Mabel, frightened at his emotion. "She liked the flowers very much and kissed them, and told me to bring this back to you."

"God bless the child!" cried Ralph, catching up his hat and taking the little one in his arms.

Up the street they went, faster and faster. Mabel did not dare ask to be left at her own house.

Mrs. Fenwick saw them coming. She started toward the door, but it had already been opened. Mabel walked in and Ralph and his wife stood motionless in each other's arms. Mabel walked about the room, feeling a trifle ill at ease. Finally she returned to speak to them, smiling bravely, though there were tears in her eyes.

"I wish," she said, "that it was time for Fay to come back. I don't think I can take care of you two much longer."

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Our Household.

FAMILY FINANCIERING.

"They tell me you work for a dollar a day: How is it you clothe your six boys on such pay?"

"I know you will think it conceited and queer, But I do it because I'm a good financier."

"There's Pete, John, Jim and Joe and William and Ned—
A half dozen boys to be clothed up and fed."

"And I buy for them all good, plain victuals to eat;
But clothing—I only buy clothing for Pete."

"When Pete's clothes are too small for him to get on,
My wife makes 'em over and gives 'em to John."

"When for John, who is 10, they have grown out of date,
She just makes 'em over for Jim, who is 8."

"When for Jim they've become too ragged to fix,
She just makes them over for Joe, who is 6."

"And when little Joseph can wear 'em no more,
She just makes 'em over for Bill, who is 4."

"And when for young Bill they no longer will do,
She just makes 'em over for Ned, who is 2."

"So you see, if I get enough clothing for Pete,
The family is furnished with clothing complete."

"But when Ned has got through with the clothing, and when
He has thrown it aside, what do you do with it then?"

"Why, once more we go 'round the circle complete,
And begin to use it for patches for Pete."
—S. W. Foss, in *Yankee Blade*.

BABY'S WARDROBE.

LOUISE LONG CHRISTIE.

No. 2.



VERY mother should feel that more care is due to her own physical health than to the preparation of baby's wardrobe; so, while the little clothes can be dainty and beautiful, it need not take all the mother's time to prepare it, either by hand or at the sewing machine.

A great many are now favoring the use of knitted cotton bands, as very few skins can endure flannel next it. These can be knitted like a stocking, in ribs, and should be a quarter of a yard deep. However, flannel over the bowels is very necessary to a young child, so I think they are quite as comfortable made of soft, Saxony wool and knit on coarse, steel needles. In the middle of the front and back should be



DRESS.

knit a firm, short strip to pin the diaper to, thus keeping both in place.

Some prefer to do without socks. If they are to be left on after being wet, I should say, by all means have none; but with several pairs on hand, there need be no neglect in this matter. These are best knit like a short stocking, and they wear best of all. Some buy the short, cashmere hose; these are very nice, and wear better than those that are crocheted. However, if you can do no better, crochet them or make a little bootie of chamois skin.

Another very necessary article for a

small baby is a pad made of two layers of cotton batting between some thin material—old swiss or lawn, if you have it; cheese cloth if you must buy new. This can be fastened to a band which is pinned around the waist. This serves to protect the flannels of the baby, and the dress of the person who is holding the baby. Of



CLOAK.

course this must be changed as frequently as the diaper.

No careful mother will allow the mattress of her child's bed to ever get wet. Protect it with a piece of rubber cloth; over this lay a blanket, then the sheet. To protect these, have several of these thin pads to lay under the child. These are more easily laundered than all the bedding of the crib.

Never place a heavy covering over a little baby. Everything for the bed should be light and warm. Soft blankets, a soft comfort made of cheese cloth, never a heavy shawl. Remember, you lay your child down with all its clothes on to sleep; if you cover it heavily, when you take it up it is likely in a profuse perspiration, as you yourself would be under like circumstances. At such a time, stop to think whether it is just the thing to carry the child to an open door, or stand with it in a draft of air. Many ailments can be traced to just such carelessness.

Dresses of soft wools, like the illustration, can be used on cool or rainy days, as upon rainy days the starch is taken out of white goods, and it loses its freshness so soon. Long cloaks, if of good material, can be utilized as a short cloak and dress when shorter clothes are needed. The best economy is to provide material that will work up into other garments when the change is necessary.

HOME TOPICS.

CARE OF BREAD.—When the loaves of bread are taken from the oven, stand them on their sides on the bread-board and cover with a clean bread-cloth. A yard of heavy, unbleached table-cloth will make two bread-cloths. They may also be made of the best parts of a table-cloth that is worn too much to use on the table, but these do not last very long. Never use a bread-cloth for any other purpose, and see that it is frequently washed. A tin box with a close-fitting cover is the best to keep bread in, but the bread must not be put away until it is entirely cold. Do not put fresh bread into the box with stale, but clean the box out and wipe it well before putting in the new bread. If slices of bread are left from the table, lay them together evenly and slip them into a paper bag before putting them into the bread-box. Keep the bread-box in a cool, dry place. All bits of stale bread should be thoroughly dried, then rolled, sifted and stored in a tin box for use in breading chops, fish, oysters, etc., and for puddings. If the bread is toasted brown before rolling, it is nice in soup.

SOW WHAT YOU WOULD REAP.—The one unpleasant thing about life on too many farms is that the work is never done. There is no vacation, no time for recreation. This is hard enough for any one, but it is doubly hard for the boys and girls. If they could have a half day often to go fishing, nutting, riding or

visiting, life would be much brighter for them, and they would not be in such haste to leave the farm and crowd into the cities, leaving father and mother alone on the farm in their old age. I have heard parents say, with pride, of a boy fourteen or fifteen years old: "He does a man's work on the farm," never thinking that this meant that he was doing too much work for a boy, and that by the time he was twenty-one he would be stoop-shouldered and stiff-kneed instead of strong and vigorous for his life work, which ought then to be only earnestly begun.

I have seen some parents who seemed to think that the sole object of their children's existence was to wait on them, and did not consider that a child can grow weary as well as themselves. The farmer would know better than to put a young colt to as steady and hard work as he does his horses, but he is careless with his boys. Of course, every child owes a duty to his parents, but parents also owe a duty to their children. While children ought to work according to their age and strength, thoughtful care should be taken that they are not overworked, and that they have the needed time and opportunity for play and rest. Their life is all before them, and if overworked now it will affect all their after lives.

If the qualities of love and tenderness, of thoughtful care and unselfishness are lacking in the parent's treatment of his children, these qualities will not be apt to spring spontaneously into the hearts of the children when that parent is old and dependent upon them for care.

MAIDA McL.

WOOD CARVING FOR BOYS.

BY KATE KAUFFMAN.

No. 1.

Any boy may feel that he is undertaking a manly and respectable occupation when he tries to carve in wood. To do it well requires some sense in the head and some skill in the hand. It is not necessary to have many tools. A chisel three quarters of an inch wide, a curved tool called a hollow gouge, and a parting-tool, besides the boy's pocket-knife, are all that he needs to make all the patterns given in our illustrations. Generally these tools are about a farm-house, and if not, the three can be bought for a dollar. They need to be set in handles, which cost about five cents each. New tools always require grinding on a grindstone; after that they need only a frequent rubbing up on a whetstone.

The parting-tool, if held upright and struck with a mallet, makes a cut like a V, and for that reason it is sometimes called the V tool. If you hold it in your right hand in an almost horizontal position, and push it gently, directing its course with the left hand, it makes a little gutter. You must always use it gently, because it is easy to dull or nick the edge. If you wish to make a large gutter (that is the best way I can express it), you had better go over the cut two or three times, gradually deepening it.

You need two iron clamps or wooden ones. Perhaps mother has some for her quilting-frames or belonging to her curtain-stretchers. If not, you can buy a pair at the hardware store. You ought to get two for twenty-five cents.

The patterns given for carving are on strips of wood only one inch wide, but, of course, you are smart enough to see that they might be enlarged. Take No. 1. If you measure you will find that the divisions are three eighths of an inch apart. The design covers the lower half inch of the wood. Take a ruler with the inch marks on it and put points on your strip of wood at the proper intervals. Mark the lower point exactly as they ought to be. Having done this, hold your chisel upright and hit with your mallet so that it will sink in the wood deeper at the upper part of the point, and at the lower edge be only even with the surface of your wood. Then with your chisel, cut out the wood below the points. The vertical lines are cut with the parting-tool, and the round hole at the top of each line may be put in with an awl. The beauty of this design depends upon the neatness with which it is done.

No. 2 and No. 3 are so simple that they scarcely need description. No. 4 is not different from the two above it, except that instead of the chisel the flat gouge is used.

No. 5 begins to offer difficulties. You must think about it a little while before you undertake it, and perhaps you may spoil a few points. The under points must first be cut only on their lower edges; then the large, over-lapping points must be outlined by holding the chisel upright and striking it with the mallet; then slant down each side of the under points.

No. 6 is really easier than 5, because it is less contracted. Large, simple designs are not so likely to be broken and nicked on the edges, and good wood carving must be clean-cut.

No. 7 is the same as the two above it, except that the gouge is used to make the curved instead of straight lines.

No. 8 is very handsome. You would better enlarge this and put it on a strip of wood two inches wide. Make the large top points and merely leave the wood for the underneath design; then carefully model it and divide it into three parts.

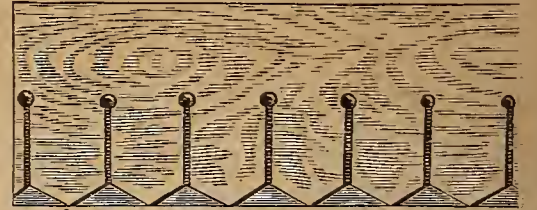
For a mallet, you need one almost as large as a croquet mallet, with a short handle. Some carvers like a mallet shaped like a potato masher; this can be hit on any side. Of course, a hammer would do, but it is best to pound with something that presents a large surface. Now, boys, do try wood carving.

HOW TO USE AND SAVE EARLY FRUITS.

While numerous directions are given in household papers for serving fruits fresh, preserving and pickling, they are usually left until late in the season, when the early fruits have gone. And as currants, gooseberries, strawberries, raspberries and cherries are plentiful in almost every farmer's home, it is well for the country housewife to know how best to serve them while in season and put them up for winter use.

STRAWBERRY FLOAT.—Crush a pint of strawberries and mix with a pint of sugar; beat the whites of four eggs, stir in with the fruit, and beat all together until it stands in a pyramid.

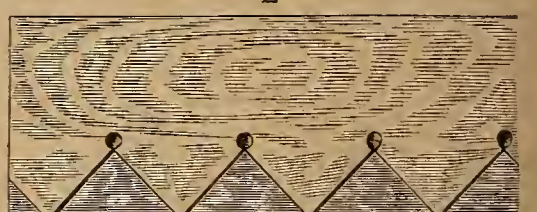
STRAWBERRY CREAM.—Cover half a box of gelatine with half a teacupful of cold water and soak half an hour; put a pint



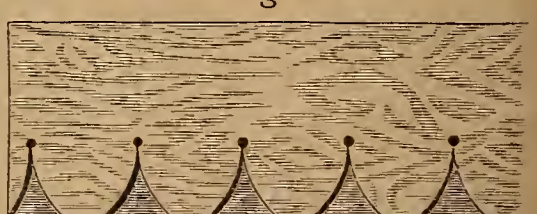
1



2



3



4

WOOD-CARVING DESIGNS.

of milk on to boil, add to the gelatine with a pint of strawberry juice; take from the fire, strain and stand in a cool place; when cool, add a cupful of sugar, stir, pour in a mold and set on ice to harden. Serve with whipped cream.

STRAWBERRY PRESERVES.—Pick and prepare the berries. Allow a pound of sugar to a pound of fruit. Let stand with the sugar sprinkled over the berries for four hours, then boil slowly half an hour.

CANNED STRAWBERRIES.—Select firm, ripe strawberries, put in a kettle on the stove and let come to a boil; add a quarter of a pound of sugar to every pound of fruit. Fill the cans, which should be in a pan of warm water, and seal immediately. Set in a cool, dark place. All small berries may be canned in this way.

STRAWBERRY JELLY.—Select berries that

are not over ripe, put them in a stone jar, stand in a kettle of cold water, cover the top of the jar and boil slowly until the berries are soft. Strain through a jelly-bag. Measure the juice, and to every pint allow one pound of sugar. Put the juice in a preserve-kettle and set over the fire; boil twenty minutes, then add the sugar, stewing until dissolved; let come to a boil, take up, put in glasses and set away in a cool place.

CURRENTS.—Select large clusters, rinse in cold water. Keep in a glass bowl and serve in saucers around a pyramid of powdered sugar.

CURRENT JELLY.—Select ripe currants, scald and mash; when cold, strain through a flannel bag. Allow three quarters of a pound of sugar to every pint of juice. Boil the juice twenty minutes, add the sugar, stir until it dissolves, let come to a boil. Take up, put in glasses, cover and set away.

GOOSEBERRY FOR.—Top and stem a quart of ripe gooseberries, and stew them in one pint of water until they are tender; press through a colander, add a tablespoonful of butter, a cupful of sugar and the beaten yolks of four eggs. Beat all until very light, then pour in a glass dish. Beat the whites of the eggs until foaming, mix in half a cupful of powdered sugar and beat until stiff; heap this on top of the gooseberries and stand away until very cold.

GREEN APPLE SPONGE.—Boil a pound of sugar in half a pint of water. Pare a dozen large, green apples that cook well, and stew until tender. Cover half a box of gelatine with cold water and let stand while the apples are stewing; when done, add the gelatine, strain, flavor with the grated rind and juice of two lemons, and stir until thick and cold. Beat the whites of three eggs to a stiff froth, stir them into the apples and beat until cold; pour in a mold and set aside to harden. Serve with vanilla cream.

APPLE FLOAT.—Pare, core and steam ripe, tart June apples until tender, press through a sieve and set aside to cool. When cold, add a cupful of sugar and the juice of a lemon. Beat the whites of six eggs very stiff and add to the apples, then beat all together and serve immediately.

CHERRY TAPIOCA.—Wash a cupful of tapioca through several waters, cover with cold water and soak all night. In the morning put on the fire with one pint of boiling water and let simmer slowly until the tapioca is clear. Stone two pounds of sour, early cherries, stir into the boiling tapioca and sweeten. Take from the fire, pour into a dish and stand away to cool. Serve very cold with sugar and cream.

ELIZA R. PARKER.

HOME-MADE LINEOLEUM, OR PAINTED CARPET.

I will tell the readers of the FARM AND FIRESIDE of my home-made lineoleum, although perhaps the idea is old to you. The plan is common in this neighborhood. Take an old carpet, mend the worn places smoothly and neatly, clean it thoroughly. Move all furniture out of the room, tack the carpet smooth and tight on the floor. Now take paint (priming will do for two coats) and paint, endeavoring to fill up the crevices. Let each coat dry thoroughly before putting on the next one. Then take mixed paint and put on the ground color, of some light drab. When that is dry, cut a pattern out of soft tin or stiff cardboard (a quilt-block pattern is nice and easy to cut); lay the pattern on the painted carpet and paint the openings in some bright colors. We used red and green. You can always have your carpet like new by washing with milk and warm water. The milk should be sweet. We like ours very much, and have used it two years. It is nice for kitchen, hall or dining-room.

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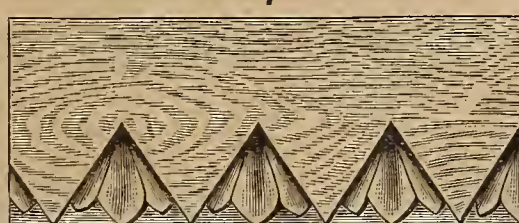
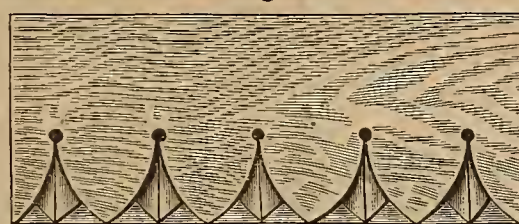
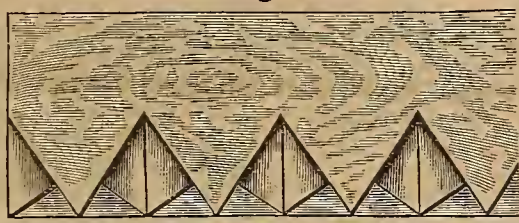
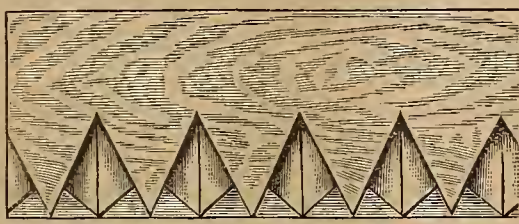
DRESS.

This is an all-absorbing subject to women generally. Why? Well, because clothes wear out, the fashion of them fadeth with each departing season, the weather spoils them; and so if they are not to replenish in toto, they are to remake, teasing us with nearly enough good material to which must be added some new, to help out the confection we would like.

"The daughters of Robert Ingersoll have so comfortably solved the problem of dress as to have but two. The one for state occasions, dinners, receptions and the like, of white wool or India silk; the other of gray cloth for street wear. When these succumb to the ravages of time they are simply renewed in like fashion. No desire for change in color; no anxiety for what is newest; no searchings for bargains, but fine and dainty material, simply made, seems, after all, to express the highest ideal of a pure and tender womanhood."

So I quote from an exchange. Ah, if more of us could bring our tastes down to just such a wardrobe, how much trouble, anxiety and time it would save us! A housekeeper would have to add two dresses for domestic purposes.

The dress of country people has long been a vexed question, to which there has been no very satisfactory solution so far. The dressmaking of smaller places is apt to undergo very severe criticism upon its arrival in a larger place. The question of adaptability in dress, always so pertinent, is of paramount importance where the attire of women who reside in the country is concerned; and the cause of so many pitiful failures in the matter of provincial



WOOD-CARVING DESIGNS.

apparel may be traced to attempted imitations of elaborate city styles, which are never appropriate for country wear. A woman of quiet tastes will always make the best appearance at all times.

It is when the dwellers in the country wish to dress as their sisters in the city, that so many mistakes occur. A dress that is suitable for a promenade upon city pavements would be out of place for a walk upon the dusty roads of the country or a stroll through the fields. As a rule they are too sombre. All shades of gray wear well and are preferable to black, although this color is oftenest chosen. All sorts of extreme styles should be zealously avoided.

A long ulster to entirely cover the dress is a great protection during driving, but it is apt to muss the underdress. There is no wrap a woman looks better in than a tight-fitting ulster of good cloth. Beneath this an inferior dress can be worn so as not to receive the wear on something better. Too many out-of-town people make the mistake of using their best wearing apparel for shopping; a city lady never does this.

Unless one goes a great deal into society, very few dresses are necessary. It would be less care in every way if women would

bring their wardrobes down to fewer pieces. Even the care of them is a burden, and the fewer one has the better. Styles in everything undergo such rapid changes, so many things can be had ready made, that it is like laying up for the moth and mould to have things laid by. It takes a great deal of time to repack them every year. A friend of mine goes through her wardrobe every season, uses everything she can for that season and burns the rest. It saves her house from moths and saves her a great deal of work.

BETTINA HOLLIS.

HINTS FOR SUMMER.

I have perused the pages of FARM AND FIRESIDE for nearly two years, and to my mind each new number is better than the last. I do enjoy the home talks and the good sense shown in the sisters' letters.

Christie Irving, I tried your cucumber salad last summer and it was splendid. I am so glad you told us how to settle the ants when they get too friendly; they are as ruinous to the cucumber, I believe, as the striped bug, only instead of eating the leaves they eat the rind of the cucumber and cause them to wither.

Maida McL., I would like to shake hands with you. You echo my sentiments when you tell the tired mother to rest. If the weary mothers would try and snatch an hour or so of sleep after dinner she would soon see how much better she could cope with the work before her. Now, I do not try to keep up with some neighbor as to my work. I do the best I can, and the most necessary; the rest I wedge in as I can, and can say my prayers with a clear conscience.

As warm weather is here, let me tell some of the sisters how I manage in summer. I wash twice a week, so soiled clothes will not lie too long and grow musty or damp. I iron what I have to, and no more. The children's underwear I shake well, iron exposed parts and air them; then they are ready to lay away. I never iron stockings; it is just as well to smooth them nicely and roll up. Your dreams are as sweet in sheets with nicely-ironed tops as though they were ironed all over. Put a tiny bit of starch in rinsing water and the garments will look glossy and wash easier.

Keep windows, cupboards, beds and floors clean, and put away all ornaments that did duty in winter; that is, woolly stuffs or heavy bric-a-brac. Put up cheese-cloth curtains, pull up the carpets, stain or paint the floors. Put linen covers over the furniture, and try and rest and take what comfort you can, for life is short.

Of all things, don't get hot meals three times a day. John's second wife won't do it, and I don't propose to kill myself and give my John a chance to love some other woman. I am very selfish as to that, for after twelve years of married life, and six babies, we love each other still. I know it is terribly old-fashioned, but I like the style.

Don't forget to keep the babies healthy and cool and well bathed in hot weather. Let them make mud pies and have a posy garden of their own, or give them posies from your own garden. Don't forget what comfort we took with rag babies who had blonde locks made of corn silk, and black bead eyes and red yarn lips, and how we did love them and our little wooden pail and broken dishes picked up from many back yards. Oh, we were all babies once!

ANNA L. CLARK.

WHY WILL GIRLS USE SLANG.

BY MAUREEN DHU.

Last evening a gentleman coolly informed me that he didn't use slang any more; he considered it altogether too feminine. I felt my cheeks burn and would fain have opposed the ungallant insinuator, but being unprepared to defend the honor of our sex, I was obliged to treat him with silent contempt. However, after a little cogitation, I concluded it was the best thing I could possibly have done, for that the majority of our girls do use slang, is a deplorable fact that cannot be honestly denied. And why is this? Surely, it is not a quality that any one admires; yet no matter what society you mingle in, you are sure to find it (and, I am sorry to say, find it most plentifully) among the ladies. Will you pardon my quoting part of a conversation I accidentally overheard a few days since?

"Great Scott, Dell, I wish you'd get a

hustle on! You'll get left yet, or I miss my mark."

Shocking language, isn't it? And what is still more shocking, it proceeded from the rosy lips of an accomplished society belle. Please don't look so incredulous. She was accomplished, or at least was considered so; that is, she was a fashionable boarding-school graduate, who could talk slang in half a dozen languages if she choose, and whose music was pronounced "divine." The only excuse I can form for her is that she used such expressions unconsciously, and that is the excuse given in nine cases out of ten. I often think of "Scotland's sweetest bard," who sighed:

"O wad some power the giftie gie us,
To see ourselves as others see us."

and add in a still deeper sigh:

"O wad some power the giftie gie us,
To hear ourselves as others hear us."

Although I have said the majority of girls use slang, there are some who take a pride in using pure and perfect language; and, oh, what a pleasure it is to converse with these! I once heard a gentleman ask: "Why is it that Miss T. is such a favorite? She certainly isn't very attractive appearing." "No," returned his friend, "but, oh, she is a perfect talker." "A perfect talker." What a flattering attribute it is; an attribute that every girl must admire, that every girl must covet. Then why will they use slang?

ADDRESS WANTED.

If Lotta Martz will send her address, which she failed to put in her letter, we will be glad to answer it for her.

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Our Sunday Afternoon.

THE COMMON OFFERING.

It is not the deed we do,
Though the deed be never so fair,
But the love that the dear Lord looketh for,
Hidden with lowly care
In the heart of the deed so fair.
The love is the priceless thing,
The treasure our treasures must hold;
Or ever the Lord will take the gift,
Or tell the worth of the gold
By the love that cannot be told.
Behold us, the rich and the poor,
Dear Lord, in the service draw near;
One consecrateth a precious coin,
One droppeth only a tear;
Look, Master, the love is here!

—Christina G. Rossetti.

"TAKING INTEREST."



HE," said the manager of a great retail establishment, pointing out the forewoman of one of the departments, "is the most successful of all the three hundred salespeople in the house. She began behind a small counter where different colored embroidering silks were sold. I observed that customers would ask for her, and if she was engaged, would wait until she was ready to serve them.

"I wished to find out the reason for this, and offered to bring another saleswoman to a patient customer who was waiting on her one day.

"No," she said. "Miss Crale never forgets the kind of silk which I use. She remembers the grade and even the shade which I bought before. And she takes such an interest in it!"

"These two qualities—her memory of the preferences of her customers and her interest in them—have made her the best saleswoman that we have ever had."

A daughter of a prominent senator made his house the most popular resort in Washington a few winters ago.

"There are many women here," said a friend, "more beautiful and more brilliant than Miss Dash; but she never forgets you or anything that concerns you. After years of absence, if you go to her house, she will remember that you take three lumps of sugar in your tea, that you dislike the color of yellow, and that your favorite songs are Scotch ballads. It is a trifling quality, but certainly it gives her a wonderful charm."

No quality will strengthen the influence of a sister, a wife or a mother so much in her home as this persistent remembrance of the little likes and dislikes of those about her, with a hearty effort to indulge them.

Surely every woman should try to strengthen her influence in the field in which God has set her to work. Some of them may complain that they have no memory for trifles, nor a keen sympathy with the wants or feelings of others. As a rule, this is because they are exclusively occupied with their own wants and feelings.

Put self out of your heart and you will be surprised to find how large and warm a tenement it is.

YARD-WIDE CHRISTIANS.

We were in a dry-goods store to-day. The young men and women were busy displaying the latest styles—goods of all shades and patterns and textures and widths. "Yes," said a young miss energetically, "this is a full yard wide." She meant that the particular pattern she was recommending, was of normal breadth. "Yard-wide" is a synonym for good measure. So many yards will make a garment if it is a "yard-wide." If it is only "three quarters" in breadth, more must be added to the length. People prefer goods a full yard wide.

It is so in the Christian life. There is a great demand for yard-wide Christians. Narrowness is abnormal. The need is for broad-minded, generous-hearted, sympathetic, consecrated, helpful, ready-to-lend-a-hand Christians. Such people have a wide outlook. They take liberal views of things. They plan magnificently. They are true blue. Their broad shoulders are always under churchly burdens. They lift evenly all the year round. You may lean on them, and lean hard. Their

courage never fails. Their zeal never tires. Their faith never dies. Everyone is a color-bearer for the King.

Away with your sickly, puny disciples! Pigmies are of small account. We want none of the half-a-yard-wide sort. These are stirring times! Awful times! Glorious times! Oh, for a host of young men and women of whom it shall be said: "They are yard-wide Christians!"—*Epworth Herald*.

CHILDISH ERRORS.

Sometimes one fixes a fault by noticing it too much. It becomes an expression of nervousness. The child repeats the fault through an inability to pass over it. It becomes like a hard word in the spelling-book that he has met before. He recognizes the word without knowing its name, and at the same moment remembers his struggles with it, and the painful impression fills him with nervousness; his mind becomes confused and he cannot control his thought. It is wise with a fault, as with the hard word, to let it go to escape it. Omit the hard word; avoid anything to excite the habitual fault. Presently the child forgets the fault. It may be said that injudicious parents often create their children's faults.—*Harper's Bazar*.

GOOD HANDS.

That is a good hand which is put out to help some one who has fallen by the wayside.

That is a good hand which knows how to make pain easier and headaches vanish.

That is a good hand which knows how to give heartily and freely.

That is a good hand which is put out to help you or me as we walk along in life; when we feel we need some one to protect us.

That is a good hand which never wrote anything of which it was ashamed, and which never put its hand to fraud and dishonesty.

That is a good hand which helps along the sick and the weak, the helpless and the poor.

That is a good hand which does its work well; whatever it may be, wherever it may lie, it doth not grow weary, and it doeth its work so it is worth its wage.

BE WATCHING.

In Edinburg, when our queen first came, the vessel that brought her landed in the evening. It was concluded, "Oh, she will not come ashore till nine in the morning!" and our Lord Provost had that idea. What happened? The queen was very famous for taking people by

surprise, and she landed between six and seven. The chief magistrate was sadly ashamed of himself. He did not lose his place; but he bitterly regretted that he had not been waiting for her, to welcome her when she set foot on the shore. I think it will be so with those who are not looking out for Christ's coming. They will regret not being ready to give him a hearty welcome.—*Bonar*.

A WISE SAYING.

What the church wants to-day is to get down in the dust of humiliation and confession of sin, and come out and be separate from the world. And then see if we do not have power with God and with man. What is success? The gospel has not lost its power; it is just as powerful to-day as it has ever been. We want no new doctrine. It is still the old gospel with the old power, the Holy Ghost power; and if the churches will but confess their sins and put them away; if they will but lift up the standard higher, instead of pulling it down, and pray to God to raise us all up to a higher, holier life, then the fear of the Lord will come upon the people around us. When Jacob set his face towards Bethel and put away strange gods, the terror of God fell upon the cities round about them.—*The Faithful Witness*.


For the Brides of June

A WHOLE PAGE of Practical Hints and Helps about the Wedding Trousseau, the Ceremony, the Flowers, the Reception, the Going Away and the Coming Back. For particulars, see the

June Number of

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Our Farm.

THE POULTRY YARD.

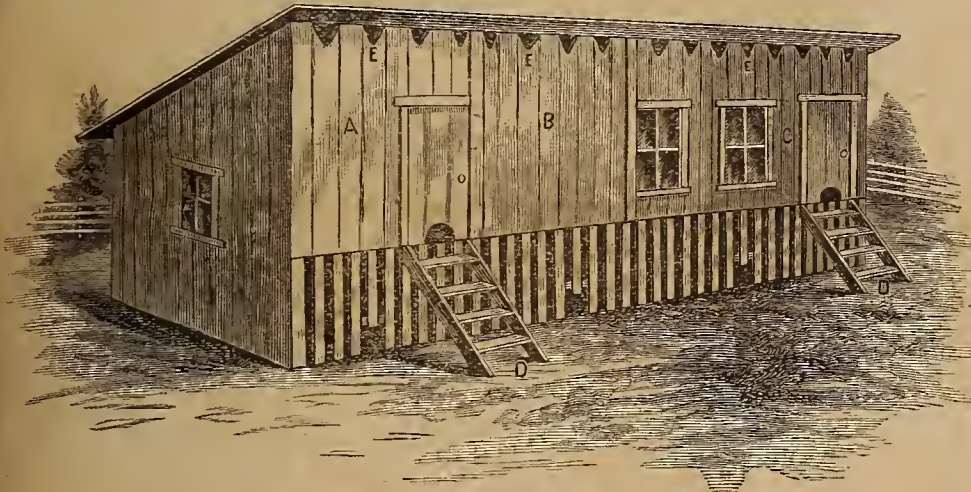
Conducted by P. H. Jacobs, Hammonton, New Jersey.

MILK AND BUTTERMILK IN SUMMER.

WHILE milk and buttermilk are excellent for fowls and chickens, it will not be beneficial to give either unless fresh and unchanged. To place milk where it is liable to be fermented (or become sour), may be the cause of bowel disease. It is true that some persons feed sour milk to poultry, but we have known it to kill chicks when given too liberally. Skimmed milk is a very cheap article in some sections, and there is no necessity for giving it in any condition except fresh, especially in the summer season. The hens will not drink sour milk if they can get milk that is fresh. For chicks, the best method is to mix the food with milk, let the chicks eat all they desire at one time, and clean away that which is left. For fowls that have a range, a pan of fresh milk at night will be all that they will need in the shape of food, as they will find all they wish on the range. Milk is highly nitrogenous and answers a purpose as a part of the ration, but, like all other substances allowed, it gives the best results when in a fresh and wholesome condition.

PLAN OF POULTRY-HOUSE.

A plan for a poultry-house has been sent us by Mr. S. Johnson, Indiana, the cost of which is \$18 for lumber and \$5 for labor, or a total of \$23. It holds 100 fowls. It is 10 feet wide, 6 feet high in front and 4 feet at the rear. The house is 32 feet long, having two rooms, each 8 feet wide,



PLAN OF POULTRY-HOUSE.

and one 16 feet wide, the room A being the laying-room; B, the feed-room; and C, the roosting-room. The perches are one foot from the floor. DD shows steps for reaching the floor. Underneath is lattice railing, enclosing the under portion as a resort in rainy weather. WW are are windows. EEE are ventilators. The house can be made of any size or height.

CATER TO THE PUBLIC.

When poultry is raised for market, the poultryman can learn much in a short time by inspecting the market stalls. The object should be to learn just what the buyers demand, and then aim to supply them. It will be found that all markets are not alike, and that a close observation on the different markets, and also on the demands of the consumers, as well as the seasons when certain kinds of poultry are preferred, will give the farmer or poultryman an advantage which will enable him to secure not only better prices, but how to breed for the best results in selling poultry. It is the buyer who is to be satisfied, as he fixes the price according to the quality and his desires. If yellow legs on poultry are preferred in certain markets, and the buyers are willing to pay something extra for such, it is to the interest of the farmer to raise fowls with yellow legs. The best breed for his purpose is that which he finds will give the buyers the greatest satisfaction, and in so regulating his breeding he is not liable to err.

ST. BEL, 2:24 1-2.

Miller & Sibley, of Franklin, Pa., owners of St. Bel, brother of the late Bell Boy, write: "We have used Quinn's Ointment with great success and believe it fulfills all claimed for it. We cheerfully recommend it to our friends." For Cuts, Splints, Spavins or Bunches, it has no equal. Trial box 25 cents, silver or stamps. Regular size \$1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

FATTEN THE FOWLS.

Never send a fowl to market unless it is in as fat a condition as possible. If a fowl will take on an extra pound of flesh, it will pay to feed it well until it reaches that stage. The reason is that there is not only a gain in weight, but in price. If a six-pound fowl, not in a choice condition, will bring ten cents per pound in the market, the extra pound may cause the fowl to sell for twelve cents per pound, being a gain of thirty-four cents for the whole, due to both increase of weight and better quality, while the food required for producing the extra pound may not cost six cents. Quality is a prime factor in market poultry.

BREEDING DUCKS.

It is too late to hatch ducklings with profit, and as soon as the old stock have ceased to lay, the flock should be reduced to a minimum. We believe old ducks to be much better than those that are young, if intended for breeding purposes, as they will lay more eggs and produce stronger young than the younger ducks; but the drakes may be not over one year old. Hence, send all the old drakes to market as soon as it can profitably be done.

HATCH YOUNG GUINEAS NOW.

The guineas came originally from a warm climate, and the young ones thrive better in summer than in the colder months. Hatch them under hens and they will not only lose much of their wild nature, but go up every evening into the poultry-house. They are excellent layers, make superior table fowls and perform good service as insect destroyers.

DO NOT WAIT FOR LICE.

It is easier to keep lice away than to get rid of them. Do not wait until lice put in an appearance, but look to the poultry-

house frequently, and use every precaution to avoid the pests. One of the most discouraging matters connected with poultry keeping is the work of lice, and the fight to prevent them should begin before they secure themselves in the poultry-house.

EGG-EATING HENS.

It is a very difficult matter to break an egg-eating hen of the vice. Never allow a broken egg to be within reach of the hens, or throw egg-shells to them, as such will teach them the habit. Make the nests in a dark place, rather high off the floor and open in front, so that the hens will have no place to stand for eating the eggs.

WATER IN SUMMER.

If water must be provided, give it in the morning, fresh, and be careful to clean out the fountains or troughs in order to guard against disease. The roup and cholera are always spread through the flock by each member being compelled to drink from the same source as the sick fowls.

AN ADMONITION.

Be careful in feeding. The cause of disease and lack of eggs is overfeeding, especially in summer. But little food is required by the hens from the farmer, and there is a liability of making them too fat when they are not left to their own exertions when they have the freedom of a large range.

SUMMER GREEN FOOD.

For fowls not at liberty, the mowings of the lawn, cabbage leaves, turnip tops, cut clover or any green food that is easily obtained, will satisfy them, but it is best to have all green food cut fine for them. A good mess once a day will be all that is necessary.

Catarrh Cured. ONE CENT!

If you suffer from Catarrh, Hay Fever or Asthma in any of their various forms, it is your duty to yourself and family to obtain the means of a certain cure before it is too late. This you can easily do at an expense of one cent for a postal card, by sending your name and address to Prof. J. A. Lawrence, New York, who will send you FREE, by return mail, a copy of the original recipe for preparing the best and surest remedy ever discovered for the cure of Catarrh in all its various stages. Over one million cases of this dreadful, disgusting, and often-times fatal disease have been cured permanently during the past five years by the use of this medicine. Write to-day for this FREE recipe. Its timely use may save you from the death toils of Consumption. DO NOT DELAY longer, if you desire a speedy and permanent cure. Address Prof. J. A. LAWRENCE, 84 Warren Street, New York.

CORRESPONDENCE.

Forty Years Experience.—Let me give you an experience of forty years in the poultry line. With the exception of a few weeks last spring, when my hens got the cholera and all died but five, there has not been a day in ten years that I have not gathered more or less eggs. I generally keep twenty hens and one rooster. I get from one to fourteen eggs each day. They have free range the most of the time, and all they will eat all the year. The feed consists of corn, oats, wheat and buckwheat, mixed. Some of them are very fat. Fat hens will lay for me if not for others. Their quarters are comfortable; that is all. L. E. G.

INQUIRIES ANSWERED.

Proper Temperature of Incubator.—H. C., Poplar, O. "What is the proper temperature for an incubator?"

REPLY:—The proper temperature is 103°.

Weak in the Legs.—Mrs. J. H. F., Dixon, Ill. "My chicks are weak in the legs. They are doing well otherwise. What is the cause?"

REPLY:—Probably due to high feeding and rapid growth. It is not necessarily fatal.

Two Chicks in One Egg.—J. C. M., Clarendon, Texas. "Is it a curiosity for two chicks to be hatched from one egg? My neighbor had such an experience."

REPLY:—We have known such to happen, but two chicks from one egg is an unusual occurrence.

Extreme Temperature of Incubator.—G. A. W., Burlington, Iowa. "How high a temperature can be allowed eggs in an incubator without their being injured?"

REPLY:—Eggs have stood the test of 116° for a very short time. Prolonged temperature of 108° will prove fatal.

Crossing Fowl.—M. E. S., New Hampshire, O. "Does a cross of the Brown Leghorn and Light Brahma make a good fowl, and of which breed should the male be?"

REPLY:—The cross is an excellent one. The Brown Leghorn male and Light Brahma female are usually preferred.

Sunflowers.—H. N., Champlin, Mich. "How are sunflowers cultivated, and what is the yield per acre?"

REPLY:—Cultivate the same as is done for corn. The yield is about the same as a crop of corn per acre. Everything depends on the fertility of the soil.

Gapes.—W. C. H., Dolores, Col. "What is the matter with my chicks? They breathe hard and finally die. I forward portion of an egg, the white being perfect and the yolk hard and small."

REPLY:—The chicks probably have gapes. The egg is due to the hen being out of condition; probably overfed and fat.

Hens Eating Eggs.—Mrs. G. P. S., Spring Hill, Kan. "How shall we prevent hens from eating their eggs?"

REPLY:—Have the nests covered so as to compel the hens to walk in, instead of alighting on the eggs. The nests should be in a dark place and raised four or five inches from the floor.

Hatching Duck and Geese Eggs in Incubator.—H. B. K., Bryan, Ohio. "1. Can duck and geese eggs be hatched successfully in an incubator? 2. Do they require the same heat and moisture as hens' eggs?"

REPLY:—1. Yes. 2. They require the same temperature, but, strange to say, ducks' eggs require a little less moisture, though it was formerly supposed that they required more.

To Prevent and Cure Gapes.—J., Mickleton, N. J. "Please give a cure and preventive for gapes in chicks."

REPLY:—A drop of spirits of turpentine on a bread crumb, forced down the throat, sometimes effects a cure, but the usual practice is to force a horsehair into the wind-pipe, twist it quickly and withdraw, which removes the worms. To prevent gapes, add a teaspoonful of spirits of turpentine to a quart of corn meal, make into stiff dough with water and feed once or twice a week. Scatter air-slacked lime freely on the runs.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Briars, Time to Cut.—W. W., Clarksburg, Ind. The best time to cut briars is mid-summer.

Incubator Plans.—J. W. M., Okolona, Miss. For illustrated incubator plans, send stamp to the editor of our poultry department, Mr. P. H. Jacobs, Hammononton, N. J.

Furniture Varnish.—E. R. M., Wilbur, Wash. Buy the best turpentine coach varnish, and thin it with spirits of turpentine until it can be spread easily with a varnish brush. The cheap, common varnishes, such as a mixture of boiled linseed oil and resin, are not very satisfactory.

Buckwheat.—D. E., Boonville, Ind., asks: "(1) Is buckwheat better to fatten sheep than corn? (2) When is the right time to sow it? (3) How much seed is required per acre? (4) Would it do to sow it in a meadow cut by the tenth of July? (5) Can the land be sown in grass after the buckwheat is harvested?"

REPLY:—(1) No. (2) Latter part of June and first part of July. (3) About three pecks per acre. (4) In your latitude it can be sown as late as the tenth of July. Earlier sowing is better. (5) Yes, if the buckwheat is sown in June it can be harvested in time to sow timothy.

Value of Fertilizer.—W. J. F., Deity, W. Va., writes: "Please state what is a fair price, at the factory, of a fertilizer with this analysis: Moisture, 10 per cent; ammonia, 1½ per cent; available phosphoric acid, 8 per cent; insoluble phosphoric acid, 1½ per cent; potash soluble in water, 2 per cent. Also of the following: Ammonia, 1½ per cent; phosphoric acid, 8 per cent; potash, 1½ per cent; sulphate of potash, 3 per cent; magnesia and soda, 25 per cent. Which of the two is better for wheat, which better for corn?"

REPLY BY JOSEPH:—The first named, at present schedule rates of plant foods, has a value of somewhat less than \$26 per ton; and the other is worth still less, by \$2 or \$3. Neither is very high grade. I would prefer the first named for any purpose.

Horsehair Worm—Electoral Commission—Adjournment of Congress.—M. D. J., Bellaire, Mich., writes: "Is it possible for a horsehair to change to a snake?—Who appointed the electoral commission?—Can either house of congress adjourn without the consent of the other?"

REPLY:—No. The *Gordius aquaticus* is a little worm resembling a horsehair in appearance, and popularly but erroneously supposed to be produced from a horsehair which had fallen into the water. The electoral commission was created by act of congress. It was composed of five members elected from each house and five justices of the supreme court. The bill specified four justices; these four selected the fifth. After the close of the first session of congress the senate may remain in executive session. The second session expires the fourth of March. During the session neither house shall, without consent of the other, adjourn for more than three days.

Carbolized Lime—Pyrethrum.—W. H. G., Arkansas City, Kans., writes: "How does Joseph make his carbolized lime?—Where does he get pyrethrum roseum; also the belows to apply it?"

REPLY BY JOSEPH:—I do not use the carbolized lime any more; for I think we have better remedies now; but if you desire to try it, I would recommend to use plaster instead of the lime. Pour a pint of crude carbolic acid into a peck of plaster and mix thoroughly. You can use this freely about your plants, around the premises, in poultry-houses, etc. Thrown into plum-trees, it is said to drive the curculio away. I have never used pyrethrum roseum; only the insect powder made and sold by the Buhach Producing and Manufacturing Co., of Stockton, Cal., under the name of hulahach. This has three times the strength of the ordinary insect powder, made of the flowers of pyrethrum roseum, and sold in the drug stores. Bellows to apply it may be bought of any seedsman or in most drug stores and hardware stores. I now prefer to use hulahach mixed with water in spray form.

Potash for Peaches.—J. D. P., Kentucky, writes: "I wish to supply a few choice peach-trees with all the potash they require, as the land is worn and rather thin. My only available source is the concentrated lye sold in one or two pound tin cans, for the purpose of making soap. How big a space will one can manure properly, and how should the stuff be applied?"

REPLY BY JOSEPH:—The probability is that your trees require not only potash, but phosphoric acid and nitrogen as well. I would not use the high-priced, concentrated lye under any circumstances; for surely there must be other sources of potash within your reach. And even if you could not possibly get a few bushels of wood ashes, a small quantity of corn-cob ashes, cotton-seed-hull ashes or tobacco refuse, I would prefer to use well-rotted barn-yard manure, or the like, rather than pay much money for a little potash in the shape of concentrated lye. If you must use it, dissolve a few pounds in water and sprinkle it on the ground around the trees, using a pound or two to the tree as a beginning, and noticing results. I would use some bone-dust or other phosphate—still better, a high-grade, concentrated, complete fertilizer—with it.

Sweet Potatoes—Cucumber Pickles—Canning Tomatoes.—R. L. H., Maryville, Tenn., writes: "Is there a sweet potato named Gen. Grant, that grows on vine as Irish potatoes?—Please give recipe for barreling cucumber pickles such as you buy in the grocery. Also give recipe for canning tomatoes in tins, as they do in the canning factories. What will cost per thousand?"

REPLY BY JOSEPH:—If I remember right, there was a sweet potato such as you mention, advertised for sale some years ago. Have not heard of it since, and never had any faith in it. Our pickle growers here lay down their cucumbers in brine in large casks or vats. Some of these hold seventy barrels, and the brine for one of them is made of five barrels of salt and the required quantity of water. The great point of importance is to keep the cucumbers constantly under the brine. In late fall, winter or spring the pickles are taken out and sold to the retailers, but how the latter handle them, I do not know. The "sour cucumbers" of the Germans, as found in some groceries, are packed down in barrels or hog-heads, with alternate layers of grape leaves or

cabbage leaves, perhaps some dill for flavoring, then covered with weak brine and allowed to sour in this pickle. They require no further preparation to fit them for use. The canning of tomatoes in tin cans for market is a particular business, and the novice who engages in it without first learning the whole of it, by practical experience in a canning factory, would most likely lose money in the undertaking. At present prices of canned tomatoes, there is no money in it, except when carried on very systematically and under favorable circumstances.

Corn Root-Aphis and Ants—Sorghum Seed as Food for Horses.—F. P., Miltonville, Kan., writes: "About a week after I planted my corn I dug down and found the corn half rotted, but sprouted. On the sprouts and roots were green lice and ants. Can you explain how the lice got there?—Is sorghum seed good to feed to horses?"

REPLY:—Will some one of our readers who has had experience feeding sorghum seed to horses please answer?—Your corn ground was probably too wet. The first time the writer ever noticed plant-lice on the roots of young corn was several years ago. In a twenty-five acre field were a number of spots where the corn was not growing thrifflily and was of a pale, yellow color. On digging up some of the young corn, the roots were found to be infested with plant-lice. It was further observed at that time that these spots were only where there was a shallow depression and a deep, clay subsoil, retentive of moisture. In other parts of the field, where natural under drainage was perfect, no plant-lice were found; hence, the conclusion that drainage would be the remedy. And it was. Land with a retentive, clay subsoil seems to be favorable for the development of the corn root-aphis. You mention ants in connection with the plant-lice. These small, brown ants always accompany the corn root-aphis. They collect the eggs laid by the aphides in the fall, care for them through the winter, and in the spring, when the young aphides hatch out, they place them in little tunnels around the roots of corn. The lice suck the sap of the plant. Ants take care of the aphides for the purpose of getting a sweet liquid secreted by the latter. In other words, these ants "keep cows."

The following methods for destroying the corn root-aphis are suggested by Prof. S. A. Forbes: "A long list of observations in the field in early spring unite in showing that the corn root-aphis takes its start only in fields where it occurred the year before, and that such fields are, as a rule, more likely to suffer severely from the attack. The early evolution of a partly-winged brood provides, however, for a general dispersal that the expedient of rotation of crops can have only a secondary value. Again, the fact that the plant-louse eggs hatch, as a rule, some days in advance of the growth of the corn in the fields (usually a week or more before corn planting), and that in the meantime the lice are dependent on young weeds in the earth, gave the hint for some starvation experiments tried in two successive years. From these we learned that young lice just hatched will perish within five days if deprived of food, whether attended by ants or not. It seems possible, consequently, that their numbers might be greatly diminished in early spring by such a thorough stirring of the soil, with disk harrows or other similar apparatus, as would keep down the sprouting herbage in the corn field. Any treatment of the field the preceding summer or fall which should diminish the number of seeds of pigeon grass or smartweed maturing in the corn, would diminish likewise the chances of survival of young root-lice the following year. I am told that these conditions are agriculturally manageable, and have arranged for field experiments to test these methods."

VETERINARY.

Conducted by Dr. H. J. Detmers. Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Cutaneous Eruption.—A. E. C., Batavia, N. Y. It is possible that the eruption you complain of is a case of cow-pox. If so, everything will be well again by the time this is published. You fail to give a good description of the pustules; a definite diagnosis, therefore, is impossible.

Rattlesnake Bite.—W. F., Waverly, Mo., wants to know how to treat an animal bitten by a rattlesnake. Good results are usually obtained if immediately, or as soon as possible after the animal has been bitten, a subcutaneous injection with tincture of iodine is made at or near the wound.

Garget in Cows.—E. M. T., Latah, Wash. The best, and in fact the only remedy, consists in very frequent and very thorough and energetic milking, because it is the only thing that will remove the clots of coagulated milk, which, if allowed to remain, will act like foreign bodies; will cause irritation and constitute nuclei for further coagulation.

Warts.—A. M. B., Cowitz, Wash., writes: "Will you tell me what will take warts off of my cows' teats? I have a valuable cow and her teats are full of big, flat, soft warts, and they are so sore I can hardly milk her."

ANSWER:—Big, flat warts situated on the teats of a cow, are best removed by careful applications of acids. Try strong acetic acid, but apply it only after milking and wash the teats each time before milking, and see to it that none of the acid gets into the milk.

Bog-Spavin and Thoroughpin.—M. R., Tionesta, Pa. Bog-spavin and thoroughpin are essentially the same thing. Both consist in a morbid enlargement—an expansion—of the capsular ligament of the hock joint. A cure is possible only if the causes (conclusion and severe exertions) can be removed or be avoided. Neither the one nor the other is apt to cause lameness, ulceration or stiffness of the hock joint. If lameness is present, it is usually due to an existing bone-spavin, hidden, maybe, by the bog-spavin.

Running Sores.—B. S., Handley, Texas, writes: "I have a young horse that is afflicted with running sores in his flanks and on his belly, in front of the sheath. He has been so since he was castrated, two years ago. They break and run awhile, then dry up and others come. He is poor and will not fatten."

ANSWER:—I wish you had given a clearer description of the running sores. As it is, it is difficult to decide whether the same are simply the result of an inflammation of the lymphatics, or something worse—farcy. But when in the former case, it will be difficult to effect a permanent healing. If you wish to

make an attempt, you may dress the sores (every individual sore) twice a day with either iodoform or a five-per-cent solution of carbolic acid. Farcy is exceedingly infectious, and must be considered incurable; therefore, every animal affected with it should at once be destroyed.

Cystic Tumor.—H. K., Valley Station, Ky., writes: "I have a two-year-old filly that has a kind of rising on her udder. It is situated between the bone and skin and can be moved about without giving her any pain. It is about the size of a guinea egg. She is a fine-looking animal. I would like to have it removed. It spoils her appearance a great deal."

ANSWER:—What you describe seems to be a cystic tumor. The best way to remove it is to peel it out, which, however, on account of the softness and fussiness of the skin of the false nostril, is not so very easy, and therefore requires an experienced hand. Care must be taken not to open the tumor, because doing so would make the operation exceedingly difficult. If it is opened by accident, the cyst may be filled with gypsum, and then the tumor will be a solid mass, and the operation will be comparatively easy. The best you can do is to employ a veterinarian, or if none can be had, a good surgeon, to perform the operation.

Red Milk.—P. J. W., Pataha City, Wash., writes: "Can you tell me what is the matter with my cow? We have been milking her for one year, but lately something has got wrong with her milk. It looks all right when it is milked, and we cannot see anything wrong with it after it stands awhile until we empty the milk out of the pan, when it looks like thin blood that settles in the bottom of the pan. She will not come in this summer. She is in a good, healthy condition and is gaining all the time and gives a good quantity of milk."

ANSWER:—There is nothing the matter with your cow. The trouble exists in the premises or the vessels in which the milk is kept. The red color is produced by a bacterine, known as Bacillus prodigiosus, which gets into the milk. The remedy consists in a most thorough cleansing and disinfection, not only of the milk vessels and utensils, but also of the premises (cellar, perhaps) in which the milk is kept. The milk itself, when drawn from the cow, is all right.

Ropy Milk.—F. H., Straubville, N. D., writes: "I have three cows whose milk, after it has stood seven hours, becomes ropy. I keep them in a pasture of seventy acres, with one hundred sheep, and they all drink from the same trough. I kept them in the same pasture with sheep last year, but their milk was all right. Will you please inform me by mail at once what ails my cows and what I must do for them? Two of them are new milch-cows and one is farrow. We put the milk separate and found out their milk is all the same. By advice of a neighbor I have given them each one heaping teaspoonful of saltpeter and one of sulphur the next night. Have given them this for about one week with no effect."

ANSWER:—If you want me to answer you by mail, you must send in the usual fee of one dollar, otherwise you have to wait until the paper comes out. If I should attempt to answer every letter by mail, without a fee, I would soon have inquiries enough to compel me to employ several secretaries, and would have nothing to pay them. As to your inquiry, your cows are all right. Ropiness of milk, the same as a red or a blue color, which makes its appearance while the milk is standing, is due to the presence of bacteria. In this case it is *Micrococcus viscosus*. The remedy consists in a very thorough cleaning and disinfection of the milk vessels, milk utensils and premises in which the milk is kept. Don't dose your cows with medicine, for they are innocent.

Brittle Hoofs—Nervousness.—H. H., Empire, La., writes: "I ask for a remedy for the brittleness of horses' feet. My horse's hoofs (we do not use shoes) have, since some eight or nine months, become brittle. They were not so before, and it seems to increase, as pieces about an inch in size are breaking out. My best horse on the farm is so nervous that he trembles (gives a sudden shake) at the sudden cough of the rider, or at the sound of a trivial noise, even far off. Is there a remedy for this? He was born and reared here, of unusual spirit, sound and healthy and has no faults."

ANSWER:—As to the brittle hoofs, you fail to inform me what has happened and what caused the hoofs to become brittle. It is, therefore, difficult to advise you. Have you, perhaps, repeatedly poulticed the hoofs, or has the horse been obliged to stand in a mud-hole? Softening the hoofs by poulticing, stopping or applications of mud or water frequently causes horses' hoofs to become degenerated and brittle, but never cures the brittle condition. The moisture needed by the hoof must come from within—from the interior of the foot. Frequent and careful paring (of course, but a little at a time) will promote the growth of the horn and keep the hoof in good shape. If any softening is attempted, let it be done with glycerine, and not with water. As to your horse that is so nervous as to tremble, treat the same with kindness, gain his confidence and convince him that nothing in your presence is going to hurt him.

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Our Miscellany.

THE inhabitants of Rhode Island have \$470 per capita in the savings-bank.

"LITTLE troubles are the deadliest." It is the little cold that leads to pneumonia.

A MAN'S idea of heaven is a place where everyone is as good as he is.—*Atchison Globe*.

No man can be made rich with money who would not also be rich without it.—*Ram's Horn*.

A CHINAMAN named Sing Hi, has taken the position of tenor in a Dorchester (Mass.) quartet.

A PARISIAN wit once defined experience as a comb that one became possessed of after having lost one's hair.

THERE is now not a town of 5,000 inhabitants in the republic of Mexico which is without a Protestant congregation.

J. B. BROADWELL, of Alpharetta, Ga., owns a goose that walks about on a wooden leg made from a piece of bamboo.

Go to a summer resort if you wish to know from their own lips who are the society leaders in your own town.—*New Orleans Picayune*.

NEIGHBOR—"I hear your father is sick. What has he got?"

Small son—"He's got the doctor."—*Puck*.

AN English jury in a case of suicide recently rendered a verdict that the deceased "committed suicide at the instigation of the devil."

MACON, GA., has a ten-year-old stenographer and typewriter who has started in business for herself in a prominent hotel of that town.

ALWAYS do the work that is put before you and you will be surprised to find how soon you will be doing the work of several men.—*Elmira Gazette*.

Dr. Hoxsle's Certain Croup Cure prevents death by suffocation in violent attacks of croup. Mailed for 50 cents. Address Hoxsle, Buffalo.

A FARMER of Henry county, Ga., claims that for fifteen years he has partaken of nothing in the shape of food or drink except buttermilk.

THE last census in England reveals the same state of affairs that our last census did. The rural population is flocking to the cities and towns.

If a man is bad his mother says it is because his wife does not understand him, and his wife says it is because his mother always spoiled him.

THE greatest man that ever lived was dependent for character and happiness far more upon his little acts than upon his great achievements.

AN Indianapolis man swore in court the other day that he did not know his wife's first name, though they had lived happily together for thirteen years.

STRANGE to say, the miserly bachelor is ensnared by the same kind of extravagant dressing that he is going to rail against after the wedding.—*Dallas News*.

TEN years ago Tennessee potatoes were unknown in the Northern markets. Now the crop annually brings in Middle Tennessee from \$1,500,000 to \$2,000,000.

BEECHAM'S PILLS cure Bilious and Nervous Ills.

TRINITY CHURCH, New York, will have the most artistic bronze doors that \$100,000 of William Waldorf Astor's money and the skill of Richard Hunt can produce.

A YOUNG lawyer in Springfield, Mo., took an appeal from a justice because the justice was suffering from a severe attack of grip when he rendered his decision.—*Kansas City Star*.

IN Bavaria a nobleman who engages in trade or mechanics or manual labor has to drop his titles for the time being, but can resume them when he goes out of business.

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HENRY CLEWS predicts that since the embarrassment of the Barings, the presumed invincible head of the London banking system, New York City will become the Clearing House of the world.

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"THE greatest artesian well in the world" was tapped near Huron, S. D. It is 935 feet deep, and with an eight-inch pipe the water spouts 50 feet into the air, with a noise that can be heard for two miles. It discharges 10,000 gallons a minute, and the ground was flooded so rapidly that great ditches had to be dug to carry the water away.

THE GREAT REGULATOR OF THE LIVER.

The success of that great Liver remedy, Simmons Liver Regulator, has tempted unscrupulous manufacturers to place on the market an imitation of it, which is calculated to deceive the public, as it bears no relation to the genuine except in the similarity of the package. The genuine Simmons Liver Regulator has the red 'X' on the front of wrapper, and is regarded everywhere as the best Liver medicine in the world.—*Morning News, Savannah, Ga.*

Recent Publications.

PROCEEDINGS of the thirty-sixth annual meeting of the Western New York Horticultural Society, held at Rochester, N. Y., Jan. 28 and 29, 1891. This valuable verbatim report is mailed, postpaid, to each member of the society, the membership fee of which is only one dollar per year. Address Johu Hall, Sec. and Treas., Rochester, N. Y.

INSECTS AND INSECTICIDES.—A practical manual concerning noxious insects and the methods of preventing their injuries, by Clarence M. Weed, D. Sc., Professor of Entomology and Zoology, New Hampshire College of Agriculture and Mechanic Arts, Hanover, N. H. A bound volume of 280 pages, fully illustrated, specially prepared for the farmer, fruit grower, florist and housekeeper. Price, \$1.25.

CATALOGUES RECEIVED.

Catalogue of Spraying and Force Pumps. P. C. Lewis, Catskill, N. Y.

Descriptions of Rocky Mountain Evergreens. By C. S. Harrison, Franklin, Neb.

Catalogue of Trackless Hay Elevator. Trackless Hay Elevator Co., Toledo, Ohio.

"Our Insect Foes and How to Destroy Them." Published by P. C. Lewis, Catskill, N. Y.

Catalogue of Sandwich Enterprise Co., Sandwich, Ill. Wind-mills, pumps, tanks, etc.

The Original Standard Virginia Ventilated Fruit Packages. South Side Mfg. Co., Petersburg, Va.

Catalogue of Whitman's Baling Presses, for baling all kinds of fibrous materials. Whitman Agricultural Co., St. Louis, Mo.

Catalogue of "Heatencook" Range, a device for heating houses with the heat usually wasted in cook stoves. Broomell, Schmidt & Co., York, Pa.

EXPERIMENT STATION BULLETINS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

CONNECTICUT.—(New Haven) Bulletin No. 103, May, 1891. Examination of the seed of orchard grass. Ash analysis of White Globe onions. On the determination of fat in cream by the Babcock method.

KANSAS.—(Manhattan) Bulletin No. 17, December, 1890. Crossed varieties of corn, second and third years.

KENTUCKY.—(Lexington) Bulletin No. 33, April, 1891. Corn experiments.

MAINE.—(Orono) Annual report for 1890, Part II. Tests of dairy cows and experiments with milk.

MARYLAND.—(College Park) Bulletin No. 11, December, 1890. Tomatoes.

MICHIGAN.—(Agricultural College P. O.) Bulletin No. 73, April, 1891. Kerosene emulsion. Some new insects. Bulletin No. 74, May 1, 1891. Foot rot in sheep.

MASSACHUSETTS.—(Hatch Station, Amherst) Bulletin No. 13, April, 1891. Directions for the use of fungicide and insecticide. Bulletin No. 14, May, 1891. Fertilizers for corn.

NEVADA.—(Reno) Annual report for 1890.

NEW JERSEY.—(New Brunswick) Bulletin No. 79, February, 1891. Experiment with nitrate of soda on tomatoes. Bulletin No. 80, March, 1891. Experiments with fertilizers on potatoes and wheat.

NEW MEXICO.—(Las Cruces) Bulletin No. 2, October, 1890. The work of the station.

NEW YORK.—(State Station, Geneva) Bulletin No. 27, February, 1891. General principles underlying the use of fertilizers. Bulletin No. 28, April, 1891. Pig-feeding experiments with prickly comfrey, clover, oat and pea forage, sorghum and mangolds. Bulletin No. 29, April, 1891. Feeding experiments with laying hens. Bulletin No. 30, May, 1891. Experiments with cabbage, cauliflowers and tomatoes. Bulletin No. 31, May, 1891. Commercial valuation of the food and fertilizing constituents of feeding materials.

NORTH DAKOTA.—(Fargo) Bulletin No. 2, April, 1891. Small fruits.

OHIO.—(Columbus) Bulletin No. 1, Vol. IV., January, 1891. Experiments with corn.

ONTARIO.—(Agricultural College Station, Guelph) Bulletin No. 43, May, 1891. Pitting the sugar beet.

OREGON.—(Corvallis) Bulletin No. 11, May, 1891. Notes on grasses and potatoes.

PENNSYLVANIA.—(State College) Bulletin No. 15, April, 1891. Influence of variety and rate of seeding on the yield of ensilage corn.

SOUTH DAKOTA.—(Brookings) Bulletin No. 23, April, 1891. Forest trees, fruits and vegetables. Bulletin No. 24, May, 1891. Corn.

WEST VIRGINIA.—(Morgantown) Bulletin No. 11, September, 1890. Crop correspondence. Bulletin No. 12, December, 1890. The Canada thistle. Annual report for 1890.

WISCONSIN.—(Madison) Bulletin No. 27, April, 1891. The feeding value of whey.

U. S. DEPARTMENT OF AGRICULTURE.—(Washington) Bulletin No. 29. Division of chemistry. Record of experiments with sorghum in 1890. Bulletin No. 20. Division of chemistry. Experiments with sugar beets in 1890. Bulletin No. 4. Division of pomology. Report on the relative merit of various stocks for the orange.

OFFICE OF EXPERIMENT STATIONS—Experiment Station Record for March and April, 1891.

COMPLETED TO DEADWOOD.

The Burlington Route, C. & Q. R. R., from Chicago, Peoria and St. Louis, is now completed, and daily passenger trains are running through Lincoln, Neb., and Custer, S. D., to Deadwood. Also to Newcastle, Wyoming. Sleeping cars to Deadwood.

GOOD WORDS.

BROOKVILLE, PA., March 20, 1891.

I received the Atlas all right. The maps are very nice and there is a great deal of useful information contained in it; besides, I am very well pleased with it and would be glad if there was one in every house. T. McCULLOUGH.

HILL, PA., March 23, 1891.

I received your beautiful picture, "Christ on Calvary." It came sooner than I expected it, and I think it just lovely. I now have both pictures. I received "Christ Before Pilate" two years ago, and I prize them greatly. I would not like to part with them, and I return many thanks for your kindness.

MRS. MARY KERR.

WHEELERSBURG, OHIO, April 10, 1891.

I have received my Singer Sewing Machine and am perfectly satisfied with it. Have tried it and would not take \$45.00 for it now.

MRS. LIZZIE ANDRE.

VINELAND, N. J., March 20, 1891.

I am very much pleased with the Cook Book and Atlas, which are more to me than you represented them to be, and for which I am greatly obliged.

MRS. EMMA B. MAYOTTH.

CLEVELAND, OHIO, February 25, 1891.

Please accept my thanks for your beautiful picture, "Christ before Pilate," which appears came from you. I ordered it through the *Witness*; it came all right with the LADIES HOME COMPANION. It is a remarkable offer you make.

LEONARD FINSTER.

LOCKPORT, ILL., March 19, 1891.

I received the Peerless Atlas a few days ago, and let me thank you a hundred times. I would not part with it for love nor gold, if I could get no other. It is just what everyone needs. I also receive the LADIES HOME COMPANION regular, with the FARM AND FIRESIDE, and I like both papers very much.

JENNIE KLINDER.

WEST UNION, NEB., March 23, 1891.

My wife received the Peerless Atlas of the World. We find it to be a daisy.

A. D. CAMPBELL.

TUSTEN, N. Y., March 24, 1891.

The Peerless Atlas received, and allow me to thank you for the same. It so much better than I anticipated. I don't see how you can give so much for so little money. I have seen maps not near so good as this readily sell for five or six dollars.

R. W. COLE.

LITTLE FALLS, N. Y., March 20, 1891.

I received the Atlas all right, and am pleased to say it contains priceless information for future reference, and it will be highly appreciated.

MRS. MARY C. WILEY.

HOPE, KAN., March 31, 1891.

The Atlas has given us much pleasure, as well as information, in the twenty-four hours we have had it. Would not take \$5 for it. Accept our thanks. I send you two new subscribers for paper and Atlas.

MRS. LIDA QUIGG.

INDIANOLA, IOWA, March 31, 1891.

I received the Peerless Atlas. I return my sincere thanks for it, and think it well worth the money.

MRS. LIDA ORR.

PHOENIX, ARIZ., March 12, 1891.

I have received the books and Peerless Atlas and am very much pleased with them.

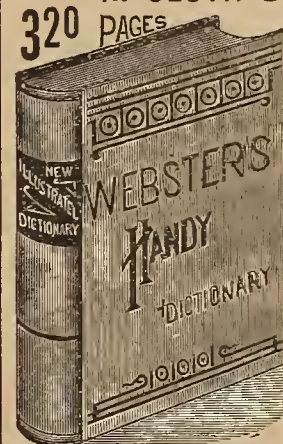
MRS. WM. E. THOMAS.

SANTA FE, OHIO, March 19, 1891.

I received the Peerless Atlas, some time past and was very well pleased with it. I think it such a good book that I would not part with it. It ought to be in every home, for it is good. It is just as it was described. I never saw a book before that showed the maps so plain. And I also, last year, received the picture, "Christ before Pilate," and was well pleased with it. I give my greatest thanks for both the Atlas and picture.

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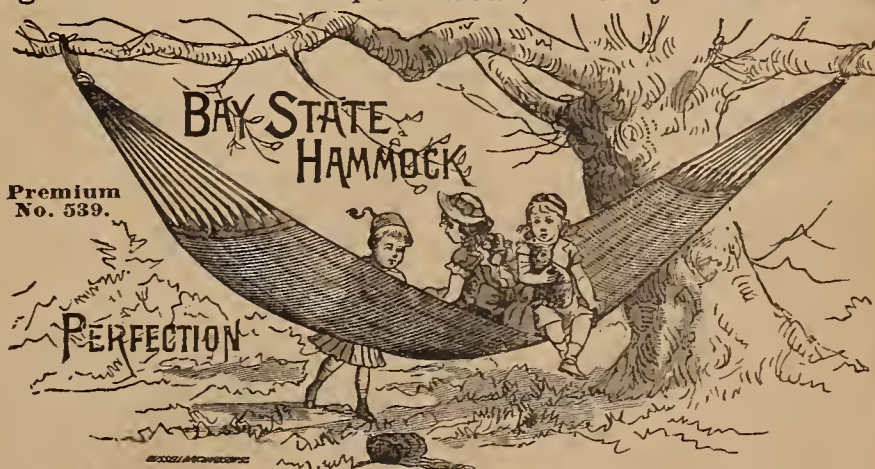
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- WHY I AM A LUTHERAN. By Rev. G. F. Kretzel, D.D.
- WHY I AM A FRIEND. By John J. Cornell.
- WHY I AM A DISCIPLE. By Rev. B. B. Tyler.
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Smiles.

OUGH!

The plough boy whistled behind his plough,
For his lungs were sound and he had no cough;
He guided his team with a pliant hough,
And watered it well by the wayside trongh.
The toil was hard, for the land was rough—
It lay on the shores of an Irish lough—
But his well-fed team was stout and tough,
And he plied his hough to flank and hough.
He toiled all day, and the crow and chough
Flew around his head, though he oft cried,
"Shough!"
But his plough at eve struck a hidden sough
With a force that sent the share clear through.
The frightened team ran off with the plough,
With the speed of the wind from the plough boy, though
He shouted, "Whoa!" And into a slough
It plunged, where the mud was as soft as dough.

—George Russell Jackson.

MISTAKEN DOCTORS.

THE following anecdote, related by the *Arkansas Traveller*, reminds us of the old sailor who fell sick and died; or, at least, the ship's surgeon said he was dead. So he was rolled in a shroud, a shot was tied to his feet, and he was being elevated to the vessel's side, when he sat up with an interested air, tore the coverings from his face, and inquired what was going on. They told him he was dead, and they were about to bury him. He maintained that he was not dead. "But the doctor says you are," exclaimed an old salt, with an air of scorn; "and who knows best, you or he?"

Doctor Ike was called to see old Ned's son, and after several visits, the doctor said to the anxious father:

"Ned, I doan wanter distress yer, hut dat boy can't git well. De conglomeration oh de membrs hah dun sot in."

"Wall, I reckon dat will kill him," Ned replied. "I doan see how a chile wid his weak constitution an' convention can git ober such a oneaseness oh de flesh. So you gins him up, doctor?"

"Yas, I issue my decrement right heah. Dat boy can't live five hours."

About two weeks after, Ned met the doctor and said:

"I thought you gln dat hoy up?"

"I did. Ain't he dead yit?"

"Dead!" repeated Ned, contemptuously;

"Why, he's chopplin' wood this mornin'."

The doctor reflected for a moment, and said:

"Dat's a nice way to fool wid medical science. How does yer expeck folks to hah confidence in de advancement of medical diskiveries when a boy acts dat way. Dat boy, sah, lifts hissef up to dispute de 'stablished rules ob de school oh physicians. I'se done wid him."

"I'se glad oh it, sah, but you yo'sef must hab made a mistake."

"No, I didn't, kase I understan's my husi-ness."

"I means dat yer mout hah lef' too soon. Ef yer'd stayed dar awhile longer, yer might hah 'stablished de proof oh yer proclamation."

"Look heah, Ned, yer'd better let me go an' see dat hoy agin."

"No, I'se much obleeged ter yer. I'se got a heap oh work to do an' I need de chile. Go off somewhar an' pizen a cat."

A COMPLETE APOLOGY.

A prominent official at Tahreez, in the course of an altercation with an English gentleman, called his adversary a liar. The result was a challenge, which seemed to the Persian preposterous.

"I fight?" said he. "What shall I fight for? I only called him a liar."

"Well," said the gentleman who took the note to him, "he says you will have to fight him. There is no way of getting out of it. It will never do to call an English gentleman a liar."

"But I say I won't fight," replied the other.

"Then you must apologize."

"Apologize! What does be mean by apologizing?"

"Why, take it all back, and say that you are sorry that you called him a liar. That is what it means."

"Is that all?" replied the Persian. "Of course. I'll apologize; I'll say whatever he wishes me to say. I lied when I called him a liar. I am a liar, the son of a liar and the grandson of liars. What more does he want me to say?"

A DIFFERENCE AS IS A DIFFERENCE.

Fair Shopper—"What is the difference between those two pieces of goods?"

Clerk—"One is marked higher than the other."

Fair Shopper—"Yes, but what is the real difference between them?"

Clerk—"I just told you; a marked difference."

WHERE THE CLAWS SHOWED.

Amy—"Jack is such a sensible, practical fellow. Do you know, I think I would love him more if he were foolish occasionally, at least in his loving."

Kitty—"Everybody but you thinks he is, dear."

LOVE'S LABOR LOST.

He was a puzzled young man, and he had come to his married sister for information.

"Say, Nell," said he, "what kind of a girl is that Smith girl, anyhow?"

"Why?" sagely answered his sister.

"I took her to the theater last night, and when the lights went down—yon know she's got such dear little hands—I got hold of one of them and squeezed it."

"And she snatched her hand away, and said you ought to be ashamed of yourself?"

"Not much."

"She didn't return the gentle pressure?"

"No, she didn't."

"What did she do?"

"Nothing; didn't seem to know her hand had been squeezed."

"Then what?"

"I tried it again, later on. Same thing. I tried it a third time. Same thing. Then I gave it up. Now, what sort of a girl is that? I thought girls usually did one thing or the other."

"So they do when they know what is going on. She didn't feel your squeeze."

"But I squeezed hard the third time."

"That doesn't make any difference."

"Well, what's the matter with the girl?"

"Why, nothing. She's all right; it's her gloves. You see, she's got a big hand—6½—and wears 5¼ gloves. I've seen her buy them. When she gets them on, the palms reach up to the second joints of her fingers. Her hand is jammed together worse than a Chinese lady's foot, and the tops are as tight around her wrists as a vise. The blood can't circulate, and after she's had them on half an hour you could stick pins into her and she wouldn't know it. If you must squeeze hands, try it on a wooden Indian; you'll get more response."

"But doesn't it hurt?"

"Hurt? It's torture. But then it makes the fresh young men think she's got such 'dear little hands,' Tommy."—*Chicago Tribune*.

THE WHIRLIGIG OF TIME.

"Time brings strange reversals. There's poor old Henpeck, for instance, who married his typewriter."

"Well, where does the reversal come in?"

"Why, it was be who used to dictate."

HOPE FOR HIM.

"You have spurned me!" he cried, bitterly. "I will go into the busy world. I will fight and win. My name shall be known and my riches envied!"

"Then," she interrupted, "try me again."

THE REQUISITE.

Aspirant—"What is the chief requisite for a young lady entering the literary field?"

Editor—"Postage stamps."



The somewhat fanciful picture above was suggested by the genuine pleasure and high spirits shown by one of Allen's workers. When he applied to me he was making just a living, or very little more. I taught him. I caused him to go to work, in his present situation, and he quickly began to earn money at the rate of **Over Three Thousand Dollars a Year**. Is there a lesson or suggestion here, for you, reader? Probably you can make just as much money as he. Why not try? I undertake to briefly teach any fairly intelligent person of either sex, who can read and write, and who, after instruction, will work industriously, how to earn **Three Thousand Dollars a Year** in their own localities, wherever they live. I will also furnish the situation or employment, at which you can earn that amount. I charge nothing and receive nothing, unless successful as above. Nothing difficult to learn, or that requires much time. I desire but one person from each district or county. I have already taught and provided with employment a large number, who are making over **Three Thousand Dollars a Year**, each. Here is something new and solid. Full particulars **Free**. After you know all, if you conclude to go no further, why, no harm is done. Those who feel interested are invited to write at once. I promise you my special, personal attention. Address, **E. C. ALLEN, Box 1013, Augusta, Maine**.

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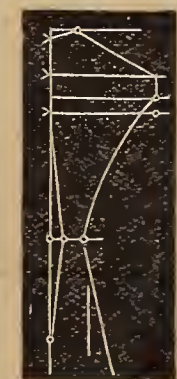
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|--|---|---|--|

Soft music is stealing.
Somersault quickstep.
Sparkling dewdrop echo.
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